Service Manual

TGM Air Conditioners

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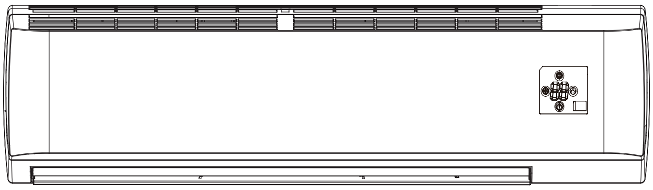
Part Ⅰ : Technical Information

1. Summary

Indoor Unit:

GWC30LB-D3DNB2G/I GWH30LB-D3DNB2G/I
GWC36LB-D3DNB2G/I GWH36LB-D3DNB2G/I
GWH30QF-D3DNB2I/I GWH36QF-D3DNB2I/I
GWH36QF-D3DNB2H/I GWH36QF-D3DNB2J/I
GWC30QF-D3DNB2K/I GWH30QF-D3DNB2K/I
GWC36QF-D3DNB2O/I GWH36QF-D3DNB2O/I



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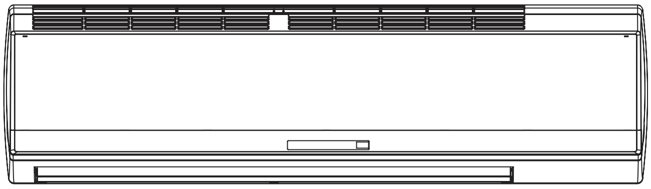

GWC30QF-D3DNB4G/I GWH30QF-D3DNB4G/I
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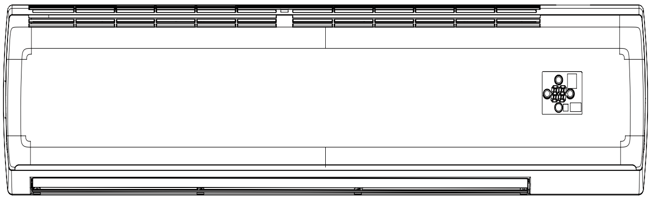
GWH36QF-D3DNB4H/I GWH30QF-D3DNB4K/I
GWH36QF-D3DNB4O/I GWC36QF-D3DNB4O/I



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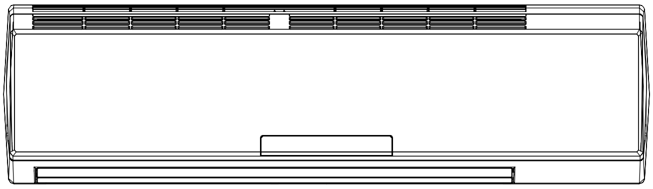

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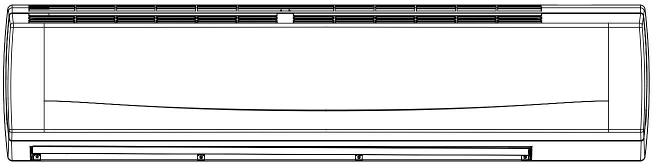
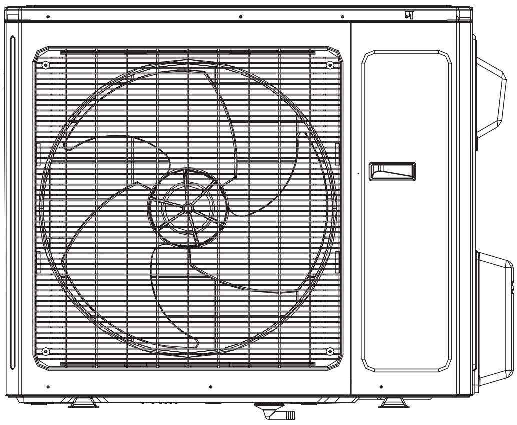
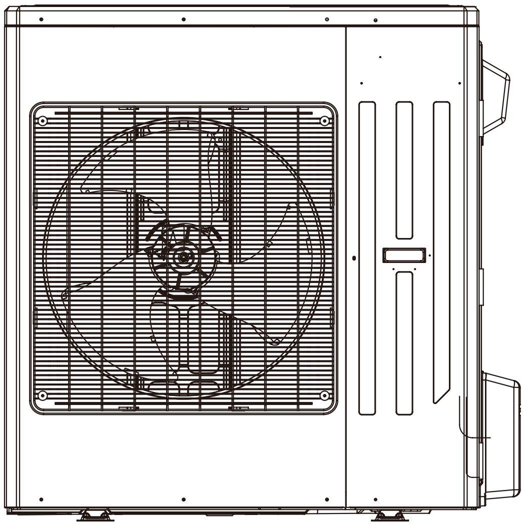


Outdoor Unit:

GWC30LB-D3DNA3G/O GWH30LB-D3DNA3G/O
GWC36LB-D3DNA3G/O GWH36LB-D3DNA3G/O
GWH36QF-D3DNB2H/O GWH36QF-D3DNB2J/O
GWC30QF-D3DNB2K/O GWH30QF-D3DNB2K/O
GWC36QF-D3DNB2O/O GWH36QF-D3DNB2O/O



GWH36QF-D3DNB2I/O
GWH30QF-D3DNB2I/O



Remote Controller:

YV1FB9F(WiFi)

YAN1F6F(WiFi)

Model List:

No	Model	Product code	Indoor model	Indoor product code	Outdoor model	Outdoor product code	Remote Controller
1	GWC30LB-D3DNB2G	CB433000102	GWC30LB-D3DNB2G/I	CB433N00102	GWC30LB-D3DNA3G/O	CB171W10700	YAN1F6F(WiFi)
2	GWC30QF-D3DNB4G	CB434005001	GWC30QF-D3DNB4G/I	CB434N05001			
3	GWC36LB-D3DNB2G	CB433000302	GWC36LB-D3DNB2G/I	CB433N00302	GWC36LB-D3DNA3G/O	CB171W10900	
4	GWC36QF-D3DNB4G	CB434005102	GWC36QF-D3DNB4G/I	CB434N05102			
5	GWC36QF-D3DNB2O	CB432022900	GWC36QF-D3DNB2O/I	CB432N22900	GWC36QF-D3DNB2O/O	CB432W22900	
6	GWC36QF-D3DNB4O	CB434019000	GWC36QF-D3DNB4O/I	CB434N19000			
7	GWH36QF-D3DNB2O	CB432023000	GWH36QF-D3DNB2O/I	CB432N23000	GWH36QF-D3DNB2O/O	CB432W23000	
8	GWH36QF-D3DNB4O	CB434017800	GWH36QF-D3DNB4O/I	CB434N17800			
9	GWH36LB-D3DNB2G	CB433000402	GWH36LB-D3DNB2G/I	CB433N00402	GWH36LB-D3DNA3G/O	CB171W10800	
10	GWH36LB-D3DNA4G	CB471000101	GWH36LB-D3DNA4G/I	CB471N00101			
11	GWH36LB-D3DNA5G	CB169001002	GWH36LB-D3DNA5G/I	CB169N01002			YV1FB9F(WiFi)
12	GWH36QF-D3DNB4G	CB434004901	GWH36QF-D3DNB4G/I	CB434N04901			YAN1F6F(WiFi)
13	GWH36QF-D3DNB2I	CB432010100	GWH36QF-D3DNB2I/I	CB432N10100	GWH36QF-D3DNB2I/O	CB432W10100	
14	GWH30LB-D3DNB2G	CB433000202	GWH30LB-D3DNB2G/I	CB433N00202	GWH30LB-D3DNA3G/O	CB171W10600	
15	GWH30QF-D3DNB4G	CB434004801	GWH30QF-D3DNB4G/I	CB434N04801			
16	GWH30QF-D3DNB2I	CB432010000	GWH30QF-D3DNB2I/I	CB432N10000	GWH30QF-D3DNB2I/O	CB432W10000	
17	GWC30QF-D3DNB2K	CB432022200	GWC30QF-D3DNB2K/I	CB432N22200	GWC30QF-D3DNB2K/O	CB432W22200	
18	GWH30QF-D3DNB2K	CB432022100	GWH30QF-D3DNB2K/I	CB432N22100	GWH30QF-D3DNB2K/O	CB432W22100	
19	GWH30QF-D3DNB4K	CB434017700	GWH30QF-D3DNB4K/I	CB434N17700			
20	GWH36QF-D3DNB2H	CB432008101	GWH36QF-D3DNB2H/I	CB432N08101	GWH36QF-D3DNB2H/O	CB432W08100	
21	GWH36LB-D3DNA3H	CB171014400	GWH36LB-D3DNA3H/I	CB171N14400			
22	GWH36QF-D3DNB4H	CB434014800	GWH36QF-D3DNB4H/I	CB434N14800			
23	GWH36QF-D3DNB2J	CB432020300	GWH36QF-D3DNB2J/I	CB432N20300	GWH36QF-D3DNB2J/O	CB432W20300	

2. Specifications

2.1 Specification Sheet

Model			GWC30LB-D3DNB2G GWC30QF-D3DNB4G	GWH30LB-D3DNB2G GWH30QF-D3DNB4G
Product Code			CB433000102 CB434005001	CB433000202 CB434004801
Power Supply	Rated Voltage	V~	208/230	208/230
	Rated Frequency	Hz	60	60
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity(Min~Max)		Btu/h	28000(9485~30026)	28000(9485~30026)
Heating Capacity(Min~Max)		Btu/h	/	28400(9997~32994)
Cooling Power Input(Min~Max)		W	2700(350~3900)	2705(600~3900)
Heating Power Input(Min~Max)		W	/	2800(650~4000)
Cooling Power Current		A	11.5	11.5
Heating Power Current		A	/	12
Rated Input		W	3900	4000
Rated Current		A	17	17
Rated Heating Current		A	/	17.5
Air Flow Volume(SH/H/M/L)		CFM	706/618/530/412	706/618/530/412
Dehumidifying Volume		Pint/h	6.34	6.34
EER		(Btu/h)/W	10.37	10.36
COP		(Btu/h)/W	/	10.14
SEER			18	18
HSPF			/	9
Application Area		yd^2	41.86-62.19	41.86-62.19
Indoor Unit	Model of indoor unit		GWC30LB-D3DNB2G/I GWC30QF-D3DNB4G/I	GWH30LB-D3DNB2G/I GWH30QF-D3DNB4G/I
	Indoor Unit Product Code		CB433N00102 CB434N05001	CB433N00202 CB434N04801
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	inch	Φ4 1/4X20 9/16X2	Φ4 1/4X20 9/16X2
	Fan Motor Cooling Speed (SH/H/M/L)	r/min	1350/1150/950/850	1350/1150/950/850
	Fan Motor Heating Speed (SH/H/M/L)	r/min	/	1350/1200/1000/800
	Output of Fan Motor	W	70	70
	Fan Motor RLA	A	0.4	0.4
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ9/32	Φ9/32
	Row-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	42 9/32X1X15	42 9/32X1X15
	Stepping Motor		MP24BA	MP24BA
	Output of Swing Motor	W	1.5	1.5
	Fuse	A	3.15	3.15
	Sound Pressure Level (SH/H/M/L)	dB (A)	51/45/41/37	51/45/41/37
	Sound Power Level (SH/H/M/L)	dB (A)	61/55/51/47	61/55/51/47
	Dimension (WXHXD)	inch	53 9/64X12 53/64X9 61/64	53 9/64X12 53/64X9 61/64
	Dimension of Carton Box (LXWXH)	inch	56 39/64X16 29/64X13 55/64	56 39/64X16 29/64X13 55/64
	Dimension of Package (LXWXH)	inch	56 47/64X16 37/64X14 7/16	56 47/64X16 37/64X14 7/16
	Net Weight	Ib	41.9	41.9
	Gross Weight	Ib	51.8	51.8

Outdoor Unit	Model of Outdoor Unit		GWC30LB-D3DNA3G/O	GWH30LB-D3DNA3G/O
	Outdoor Unit Product Code		CB171W10700	CB171W10600
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPERSSOR CO.LTD.	ZHUHAI LANDA COMPERSSOR CO.LTD.
	Compressor Model		QXAS-D23zX090	QXAS-D23zX090
	Compressor Oil		RB68EP	RB68EP
	Compressor Type		Rotary	Rotary
	Compressor Locked Rotor Amp (L.R.A)		40	40
	Compressor RLA	A	13.45	13.45
	Compressor Power Input	W	2450	2450
	Overload Protector		1NT11L-6233	1NT11L-6233
	Throttling Method		Electron expansion valve+Capillary	Electron expansion valve+Capillary
	Operation temp	ºF	61~86	61~86
	Ambient temp (cooling)	ºF	0~115	0~115
	Ambient temp (heating)	ºF	/	-4~75
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ5/16	Φ5/16
	Rows-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	37 1/2X1 1/2X29 7/16	37 1/2X1 1/2X29 7/16
	Fan Motor Speed	rpm	795	795
	Output of Fan Motor	W	120	120
	Fan Motor RLA	A	0.45	0.45
	Fan Motor Capacitor	μF	/	/
	Air Flow Volume of Outdoor Unit	CFM	2354	2354
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	inch	Φ21 21/32	Φ21 21/32
	Defrosting Method		/	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Design Pressure(High)	PSIG	550	550
	Design Pressure(Low)	PSIG	240	240
	Sound Pressure Level (H/M/L)	dB (A)	62/-/-	62/-/-
	Sound Power Level (H/M/L)	dB (A)	72/-/-	72/-/-
	Dimension (WXHXD)	inch	39 1/2X31 7/64X16 13/16	39 1/2X31 7/64X16 13/16
	Dimension of Carton Box (LXWXH)	inch	42 1/2X19X33	42 1/2X19X33
	Dimension of Package (LXWXH)	inch	42 21/32X19 13/64X33 21/32	42 21/32X19 13/64X33 21/32
	Net Weight	Ib	152.1	154.3
	Gross Weight	Ib	163.1	165.4
	Refrigerant		R410A	R410A
	Refrigerant Charge	oz	84.66	84.66
Connection Pipe	Length	ft	24.6	24.6
	Gas Additional Charge	oz/ft	0.2	0.5
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	5/8	5/8
	Max Distance Height	ft	32 3/16	32 3/16
	Max Distance Length	ft	98 27/64	98 27/64
	Note:The connection pipe applies metric diameter.			

The above data is subject to change without notice; please refer to the nameplate of the unit.

Model			GWC36LB-D3DNB2G GWC36QF-D3DNB4G	GWH36LB-D3DNB2G GWH36LB-D3DNA5G GWH36QF-D3DNB4G GWH36LB-D3DNA4G
Product Code			CB433000302 CB434005102	CB433000402 CB169001002 CB434004901 CB471000101
Power Supply	Rated Voltage	V~	208/230	208/230
	Rated Frequency	Hz	60	60
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity(Min~Max)		Btu/h	33600(7404~35997)	33600(7404~35997)
Heating Capacity(Min~Max)		Btu/h	/	34600(14979~35997)
Cooling Power Input(Min~Max)		W	4100	4100(450~4300)
Heating Power Input(Min~Max)		W	/	3800(560~4300)
Cooling Power Current		A	17	17
Heating Power Current		A	/	16.5
Rated Input		W	4300	4300
Rated Current		A	20	20
Rated Heating Current		A	/	20
Air Flow Volume(SH/H/M/L)		CFM	736/647/530/412	736/647/530/412
Dehumidifying Volume		Pint/h	7.4	7.4
EER		(Btu/h)/W	8.20	8.20
COP		(Btu/h)/W	/	9.11
SEER			18.00	18.00
HSPF			/	9
Application Area		yd^2	55.01-83.72	55.01-83.72
Indoor Unit	Model of indoor unit		GWC36LB-D3DNB2G/I GWC36QF-D3DNB4G/I	GWH36LB-D3DNB2G/I GWH36LB-D3DNA5G/I GWH36QF-D3DNB4G/I GWH36LB-D3DNA4G/I
	Indoor Unit Product Code		CB433N00302 CB434N05102	CB433N00402 CB169N01002 CB434N04901 CB471N00101
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	inch	Φ4 1/4X20 9/16	Φ4 1/4X20 9/16
	Fan Motor Cooling Speed (SH/H/M/L)	r/min	1400/1250/1000/800	1400/1250/1000/800
	Fan Motor Heating Speed (SH/H/M/L)	r/min	/	1400/1250/1050/850
	Output of Fan Motor	W	70	70
	Fan Motor RLA	A	0.4	0.4
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ9/32	Φ9/32
	Row-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	42 9/32X1X15X2	42 9/32X1X15X2
	Stepping Motor		MP24BA	MP24BA
	Output of Swing Motor	W	1.5	1.5
	Fuse	A	5	5
	Sound Pressure Level (SH/H/M/L)	dB (A)	54/49/44/37	54/49/44/37
	Sound Power Level (SH/H/M/L)	dB (A)	64/59/54/47	64/59/54/47
	Dimension (WXHXD)	inch	53 9/64X12 53/64X9 61/64	53 9/64X12 53/64X9 61/64
	Dimension of Carton Box (LXWXH)	inch	56 39/64X16 29/64X13 55/64	56 39/64X16 29/64X13 55/64
	Dimension of Package (LXWXH)	inch	56 47/64X16 37/64X14 7/16	56 47/64X16 37/64X14 7/16
	Net Weight	Ib	41.9	41.9
	Gross Weight	Ib	51.8	51.8

Outdoor Unit	Model of Outdoor Unit		GWC36LB-D3DNA3G/O(LC)	GWH36LB-D3DNA3G/O(LCLH)
	Outdoor Unit Product Code		CB171W10900	CB171W10800
	Compressor Manufacturer/Trademark		MITSUBISHI ELECTRIC (GUANGZHOU)COMPRESSOR CO. LTD	MITSUBISHI ELECTRIC (GUANGZHOU)COMPRESSOR CO. LTD
	Compressor Model		TNB306FPGMC	TNB306FPGMC
	Compressor Oil		FV50S	FV50S
	Compressor Type		Rotary	Rotary
	Compressor Locked Rotor Amp (L.R.A)		67.00	67.00
	Compressor RLA	A	17.5	17.5
	Compressor Power Input	W	3010	3010
	Overload Protector		CS01F272H01	CS01F272H01
	Throttling Method		Electron expansion valve	Electron expansion valve
	Operation temp	ºF	61~86	61~86
	Ambient temp (cooling)	ºF	0~109	0~109
	Ambient temp (heating)	ºF	/	-4~75
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ5/16	Φ5/16
	Rows-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	37X1 3/4X30	37X1 3/4X30
	Fan Motor Speed	rpm	890	890
	Output of Fan Motor	W	170	170
	Fan Motor RLA	A	0.73	0.73
	Fan Motor Capacitor	μF	/	/
	Air Flow Volume of Outdoor Unit	CFM	2589	2589
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	inch	Φ21 21/32	Φ21 21/32
	Defrosting Method		/	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Design Pressure(High)	PSIG	550	550
	Design Pressure(Low)	PSIG	240	240
	Sound Pressure Level (H/M/L)	dB (A)	65/-/-	65/-/-
	Sound Power Level (H/M/L)	dB (A)	75/-/-	75/-/-
	Dimension (WXHXD)	inch	39 1/2X31 7/64X16 13/16	39 1/2X31 7/64X16 13/16
	Dimension of Carton Box (LXWXH)	inch	42 1/2X19X33	42 1/2X19X33
	Dimension of Package (LXWXH)	inch	42 21/32X19 13/64X33 21/32	42 21/32X19 13/64X33 21/32
	Net Weight	Ib	154.3	161.0
	Gross Weight	Ib	165.4	172.0
	Refrigerant		R410A	R410A
	Refrigerant Charge	oz	84.66	91.71
Connection Pipe	Length	ft	24.6	24.6
	Gas Additional Charge	oz/ft	0.5	0.5
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	5/8	5/8
	Max Distance Height	ft	32 3/16	32 3/16
	Max Distance Length	ft	98 27/64	98 27/64
	Note:The connection pipe applies metric diameter.			

The above data is subject to change without notice; please refer to the nameplate of the unit.

Model			GWH36QF-D3DNB2I	GWH30QF-D3DNB2I
Product Code			CB432010100	CB432010000
Power Supply	Rated Voltage	V~	208/230	208/230
	Rated Frequency	Hz	60	60
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity(Min~Max)		Btu/h	33000(8800~40900)	28000(5500~30700)
Heating Capacity(Min~Max)		Btu/h	34600(16700~49400)	28800(4400~35200)
Cooling Power Input(Min~Max)		W	3220(500~4100)	2500(420~3650)
Heating Power Input(Min~Max)		W	3100(1000~7000)	2700(520~5800)
Cooling Power Current		A	14.7	11.4
Heating Power Current		A	14.2	12.4
Rated Input		W	7000	5800
Rated Current		A	19	17
Rated Heating Current		A	30	25
Air Flow Volume(SH/H/M/L)		CFM	824/706/589/441	824/706/589/441
Dehumidifying Volume		Pint/h	7.4	6.34
EER		(Btu/h)/W	10.25	11.2
COP		(Btu/h)/W	11.16	10.67
SEER			23	23
HSPF			10.5	10.5
Application Area		yd^2	55.01-83.72	41.86-62.19
Indoor Unit	Model of indoor unit		GWH36QF-D3DNB2I/I	GWH30QF-D3DNB2I/I
	Indoor Unit Product Code		CB432N10100	CB432N10000
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	inch	Φ4 1/4X20 9/16	Φ4 1/4X20 9/16
	Fan Motor Cooling Speed (SH/H/M/L)	r/min	1550/1300/1150/850	1550/1300/1150/850
	Fan Motor Heating Speed (SH/H/M/L)	r/min	1500/1300/1150/1000	1500/1300/1150/1000
	Output of Fan Motor	W	70	70
	Fan Motor RLA	A	0.4	0.4
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ9/32	Φ9/32
	Row-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	42 9/32X1X15	42 9/32X1X15
	Stepping Motor		MP24BA	MP24BA
	Output of Swing Motor	W	2	2
	Fuse	A	5	5
	Sound Pressure Level (SH/H/M/L)	dB (A)	54/49/44/37	54/49/44/37
	Sound Power Level (SH/H/M/L)	dB (A)	64/59/54/47	64/59/54/47
	Dimension (WXHXD)	inch	53 9/64X12 53/64X9 61/64	53 9/64X12 53/64X9 61/64
	Dimension of Carton Box (LXWXH)	inch	56 39/64X16 29/64X13 55/64	56 39/64X16 29/64X13 55/64
	Dimension of Package (LXWXH)	inch	56 47/64X16 37/64X14 7/16	56 47/64X16 37/64X14 7/16
	Net Weight	Ib	41.9	41.9
	Gross Weight	Ib	51.8	51.8

Outdoor Unit	Model of Outdoor Unit		GWH36QF-D3DNB2I/O	GWH30QF-D3DNB2I/O
	Outdoor Unit Product Code		CB432W10100	CB432W10000
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO., LTD	ZHUHAI LANDA COMPRESSOR CO., LTD
	Compressor Model		QXAW-F518zX440C	QXFW-D318ZX035
	Compressor Oil		FV50S or equivalent	FW68DA or equivalent
	Compressor Type		Rotary	Rotary
	Compressor Locked Rotor Amp (L.R.A)		36	30
	Compressor RLA	A	24	23
	Compressor Power Input	W	5830±3%	3350±3%
	Overload Protector		/	/
	Throttling Method		Electron expansion valve	Electron expansion valve
	Operation temp	ºF	61~86	61~86
	Ambient temp (cooling)	ºF	0~109	0~109
	Ambient temp (heating)	ºF	-31~75	-31~75
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ5/16	Φ5/16
	Rows-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	41 37/64X1 1/2×38 13/64	41 37/64X1 1/2×38 13/64
	Fan Motor Speed	rpm	940	850
	Output of Fan Motor	W	170	170
	Fan Motor RLA	A	0.73	0.73
	Fan Motor Capacitor	μF	/	0
	Air Flow Volume of Outdoor Unit	CFM	3119	5300
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	inch	Φ21 21/32	Φ21 21/32
	Defrosting Method		Automatic Defrosting	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Design Pressure(High)	PSIG	550	550
	Design Pressure(Low)	PSIG	240	240
	Sound Pressure Level (H/M/L)	dB (A)	63/-/-	61/-/-
	Sound Power Level (H/M/L)	dB (A)	73/-/-	73/-/-
	Dimension (WXHXD)	inch	43 37/64X43 1/2X16 9/64	43 37/64X43 1/2X16 9/64
	Dimension of Carton Box (LXWXH)	inch	45 1/2X18 57/64X45 39/64	45 1/2X18 57/64X45 39/64
	Dimension of Package (LXWXH)	inch	45 39/64X19 X44 9/32	45 39/64X19 X44 9/32
	Net Weight	Ib	253.53	229.3
	Gross Weight	Ib	271.17	240.3
	Refrigerant		R410A	R410A
	Refrigerant Charge	oz	123.5	123.5
Connection Pipe	Length	ft	24.6	24.6
	Gas Additional Charge	oz/ft	0.3	0.3
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	5/8	5/8
	Max Distance Height	ft	98.4	98.4
	Max Distance Length	ft	164	164
	Note:The connection pipe applies metric diameter.			

The above data is subject to change without notice; please refer to the nameplate of the unit.

Model			GWH36QF-D3DNB2H GWH36LB-D3DNA3H GWH36QF-D3DNB4H	GWH36LB-D3DNA3H
Product Code			CB432008101 CB171014400 CB434014800	CB171014400
Power Supply	Rated Voltage	V~	208/230	208/230
	Rated Frequency	Hz	60	60
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity(Min~Max)		Btu/h	33600(7404~35997)	33600(7400~36000)
Heating Capacity(Min~Max)		Btu/h	34600(14979~35997)	34600(15000~36000)
Cooling Power Input(Min~Max)		W	4100(450~4300)	4100(450~4300)
Heating Power Input(Min~Max)		W	3800(560~4300)	3800(560~4300)
Cooling Power Current		A	17	17
Heating Power Current		A	16.5	16.5
Rated Input		W	4300	4300
Rated Current		A	20	20
Air Flow Volume(SH/H/M/L)		CFM	883/765/647/559	883/765/647/559
Dehumidifying Volume		Pint/h	7.4	7.4
EER		(Btu/h)/W	8.2	8.2
COP		(Btu/h)/W	9.11	9.11
SEER			18	16
HSPF			9	9
Application Area		yd^2	55.01-83.72	55.01-83.72
Indoor Unit	Model of indoor unit		GWH36QF-D3DNB2H/I GWH36LB-D3DNA3H/I GWH36QF-D3DNB4H/I	GWH36LB-D3DNA3H/I
	Indoor Unit Product Code		CB432N08101 CB171N14400 CB434N14800	CB171N14400
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	inch	Φ4 1/4X20 9/16X2	Φ4 1/4X20 9/16X2
	Fan Motor Cooling Speed (SH/H/M/L)	r/min	1400/1250/1000/800	1400/1250/1000/800
	Fan Motor Heating Speed (SH/H/M/L)	r/min	1400/1250/1050/850	1400/1250/1050/850
	Output of Fan Motor	W	70	70
	Fan Motor RLA	A	0.4	0.4
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ9/32	Φ9/32
	Row-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	42 9/32X1X15X2	42 9/32X1X15X2
	Stepping Motor		MP24BA	MP24BA
	Output of Swing Motor	W	1.5	1.5
	Fuse	A	5	5
	Sound Pressure Level (SH/H/M/L)	dB (A)	54/49/44/37	54/49/44/37
	Sound Power Level (SH/H/M/L)	dB (A)	64/59/54/47	64/59/54/47
	Dimension (WXHXD)	inch	53 9/64X12 53/64X9 61/64	53 9/64X12 53/64X9 61/64
	Dimension of Carton Box (LXWXH)	inch	56 39/64X16 29/64X13 55/64	56 39/64X16 29/64X13 55/64
	Dimension of Package (LXWXH)	inch	56 47/64X16 37/64X14 7/16	56 47/64X16 37/64X14 7/16
	Net Weight	Ib	41.9	41.9
	Gross Weight	Ib	51.8	51.8

Outdoor Unit	Model of Outdoor Unit		GWH36QF-D3DNB2H/O	GWH36QF-D3DNB2J/O
	Outdoor Unit Product Code		CB432W08100	CB432W20300
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSORCO., LTD.	ZHUHAI LANDA COMPRESSORCO., LTD.
	Compressor Model		QXAS-D32zX090A	QXAS-D32zX090A
	Compressor Oil		FV50S	FV50S
	Compressor Type		Rotary	Rotary
	Compressor Locked Rotor Amp (L.R.A)		67	67
	Compressor RLA	A	17.5	17.5
	Compressor Power Input	W	4150	4150
	Overload Protector		1NT11L-6233/HPC 115/95/KSD 115oC	1NT11L-6233/HPC 115/95/KSD 115oC
	Throttling Method		Electron expansion valve	Electron expansion valve
	Operation temp	ºF	61~86	61~86
	Ambient temp (cooling)	ºF	0~109	0~109
	Ambient temp (heating)	ºF	-4~75	-4~75
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ5/16	Φ5/16
	Rows-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	37X1 3/4X30	37X1 3/4X30
	Fan Motor Speed	rpm	890	890
	Output of Fan Motor	W	170	170
	Fan Motor RLA	A	0.73	0.73
	Fan Motor Capacitor	μF	/	/
	Air Flow Volume of Outdoor Unit	CFM	2589	2589
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	inch	Φ21 21/32	Φ21 21/32
	Defrosting Method		Automatic Defrosting	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Design Pressure(High)	PSIG	550	550
	Design Pressure(Low)	PSIG	240	240
	Sound Pressure Level (H/M/L)	dB (A)	65/-/-	65/-/-
	Sound Power Level (H/M/L)	dB (A)	75/-/-	75/-/-
	Dimension (WXHXD)	inch	39 1/2X31 7/64X16 13/16	39 1/2X31 7/64X16 13/16
	Dimension of Carton Box (LXWXH)	inch	42 1/2X19X33	42 1/2X19X33
	Dimension of Package (LXWXH)	inch	42 21/32X19 13/64X33 21/32	42 21/32X19 13/64X33 21/32
	Net Weight	Ib	158.8	158.8
	Gross Weight	Ib	169.8	169.8
	Refrigerant		R410A	R410A
	Refrigerant Charge	oz	91.71	91.71
Connection Pipe	Length	ft	24.6	24.6
	Gas Additional Charge	oz/ft	0.5	0.5
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	5/8	5/8
	Max Distance Height	ft	32 3/16	32 3/16
	Max Distance Length	ft	98 27/64	98 27/64
	Note:The connection pipe applies metric diameter.			

The above data is subject to change without notice; please refer to the nameplate of the unit.

Model			GWC30QF-D3DNB2K	GWH30QF-D3DNB2K GWH30QF-D3DNB4K
Product Code			CB432022200	CB432022100 CB434017700
Power Supply	Rated Voltage	V~	208/230	208/230
	Rated Frequency	Hz	60	60
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity		Btu/h	30000	30000
Heating Capacity		Btu/h	/	30000
Cooling Power Input		W	2839	2839
Heating Power Input		W	/	2750
Cooling Power Current		A	12.4	12.4
Heating Power Current		A	/	12
Rated Input		W	3400	3800
Rated Current		A	15	16.5
Rated Heating Current		A	/	16.5
Air Flow Volume(SH/H/M/L)		CFM	820/706/589/441	820/706/589/441
Dehumidifying Volume		Pint/h	6.34	6.34
EER		(Btu/h)/W	10.55	10.55
COP		(Btu/h)/W	/	11.26
SEER			18	18
HSPF			/	9
Application Area		yd^2	41.86-62.19	41.86-62.19
Indoor Unit	Model of indoor unit		GWC30QF-D3DNB2K/I	GWH30QF-D3DNB2K/I GWH30QF-D3DNB4K/I
	Indoor Unit Product Code		CB432N22200	CB432N22100 CB434N17700
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	inch	Φ4 1/4X20 9/16	Φ4 1/4X20 9/16
	Fan Motor Cooling Speed (SH/H/M/L)	r/min	1550/1300/1150/850	1550/1300/1150/850
	Fan Motor Heating Speed (SH/H/M/L)	r/min	/	1500/1300/1150/1000
	Output of Fan Motor	W	70	70
	Fan Motor RLA	A	0.55	0.55
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ9/32	Φ9/32
	Row-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	42 9/32X1X15	42 9/32X1X15
	Stepping Motor		MP24BA	MP24BA
	Output of Swing Motor	W	1.5	1.5
	Fuse	A	5	5
	Sound Pressure Level (SH/H/M/L)	dB (A)	55/50/46/37	55/50/46/37
	Sound Power Level (SH/H/M/L)	dB (A)	65/60/56/47	65/60/56/47
	Dimension (WXHXD)	inch	53 9/64X12 53/64X9 61/64	53 9/64X12 53/64X9 61/64
	Dimension of Carton Box (LXWXH)	inch	56 39/64X16 29/64X13 55/64	56 39/64X16 29/64X13 55/64
	Dimension of Package (LXWXH)	inch	56 47/64X16 37/64X14 7/16	56 47/64X16 37/64X14 7/16
	Net Weight	Ib	43	43
	Gross Weight	Ib	52.9	52.9

Outdoor Unit	Model of Outdoor Unit		GWC30QF-D3DNB2K/O	GWH30QF-D3DNB2K/O
	Outdoor Unit Product Code		CB432W22200	CB432W22100
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPERSSOR CO.LTD.	ZHUHAI LANDA COMPERSSOR CO.LTD.
	Compressor Model		QXFS-D25zX090H	QXFS-D25zX090H
	Compressor Oil		FW68DA or equivalent	FW68DA or equivalent
	Compressor Type		Rotary	Rotary
	Compressor Locked Rotor Amp (L.R.A)		/	/
	Compressor RLA	A	16.9	16.9
	Compressor Power Input	W	2420	2420
	Overload Protector		HPC115/95U1 KSD115℃	HPC115/95U1 KSD115℃
	Throttling Method		Electron expansion valve	Electron expansion valve
	Operation temp	ºF	61~86	61~86
	Ambient temp (cooling)	ºF	-4~105	-4~105
	Ambient temp (heating)	ºF	/	-13~75
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ9/32	Φ9/32
	Rows-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	37 31/64X1 1/2X29 29/64	37 31/64X1 1/2X29 29/64
	Fan Motor Speed	rpm	880	880
	Output of Fan Motor	W	92	92
	Fan Motor RLA	A	0.7	0.7
	Fan Motor Capacitor	μF	/	/
	Air Flow Volume of Outdoor Unit	CFM	2354	2354
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	inch	Φ21 21/32	Φ21 21/32
	Defrosting Method		/	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Design Pressure(High)	PSIG	550	550
	Design Pressure(Low)	PSIG	240	240
	Sound Pressure Level (H/M/L)	dB (A)	59/-/-	60/-/-
	Sound Power Level (H/M/L)	dB (A)	69/-/-	70/-/-
	Dimension (WXHXD)	inch	39 1/2X31 7/64X16 13/16	39 1/2X31 7/64X16 13/16
	Dimension of Carton Box (LXWXH)	inch	42 1/2X19X33	42 1/2X19X33
	Dimension of Package (LXWXH)	inch	42 21/32X19 13/64X33 21/32	42 21/32X19 13/64X33 21/32
	Net Weight	Ib	136.7	138.9
	Gross Weight	Ib	147.7	149.9
	Refrigerant		R410A	R410A
	Refrigerant Charge	oz	77.6	77.6
Connection Pipe	Length	ft	24.6	24.6
	Gas Additional Charge	oz/ft	0.2	0.2
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	5/8	5/8
	Max Distance Height	ft	32 13/16	32 13/16
	Max Distance Length	ft	82	82
	Note:The connection pipe applies metric diameter.			

The above data is subject to change without notice; please refer to the nameplate of the unit.

Model			GWC36QF-D3DNB2O GWC36QF-D3DNB4O	GWH36QF-D3DNB2O GWH36QF-D3DNB4O
Product Code			CB432022900 CB434019000	CB432023000 CB434017800
Power Supply	Rated Voltage	V~	208/230	208/230
	Rated Frequency	Hz	60	60
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity		Btu/h	33600	33600
Heating Capacity		Btu/h	/	34600
Cooling Power Input		W	3650	3650
Heating Power Input		W	/	3620
Cooling Power Current		A	12.4	12.4
Heating Power Current		A	/	12
Rated Input		W	3900	4200
Rated Current		A	18	19
Rated Heating Current		A	/	19
Air Flow Volume(SH/H/M/L)		CFM	824/706/589/441	824/706/589/441
Dehumidifying Volume		Pint/h	6.34	6.34
EER		(Btu/h)/W	9.20	9.20
COP		(Btu/h)/W	/	9.56
SEER			18	18
HSPF			/	9
Application Area		yd^2	41.86-62.19	41.86-62.19
Indoor Unit	Model of indoor unit		GWC36QF-D3DNB2O/I GWC36QF-D3DNB4O/I	GWH36QF-D3DNB2O/I GWH36QF-D3DNB4O/I
	Indoor Unit Product Code		CB432N22900 CB434N19000	CB432N23000 CB434N17800
	Fan Type		Cross-flow	Cross-flow
	Diameter Length(DXL)	inch	Φ4 1/4X20 9/16	Φ4 1/4X20 9/16
	Fan Motor Cooling Speed (SH/H/M/L)	r/min	1550/1300/1150/850	1550/1300/1150/850
	Fan Motor Heating Speed (SH/H/M/L)	r/min	/	1500/1300/1150/1000
	Output of Fan Motor	W	70	70
	Fan Motor RLA	A	0.55	0.55
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ9/32	Φ9/32
	Row-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	42 9/32X1X15	42 9/32X1X15
	Stepping Motor		MP24BA	MP24BA
	Output of Swing Motor	W	1.5	1.5
	Fuse	A	5	5
	Sound Pressure Level (SH/H/M/L)	dB (A)	55/50/46/37	55/50/46/37
	Sound Power Level (SH/H/M/L)	dB (A)	65/60/56/47	65/60/56/47
	Dimension (WXHXD)	inch	53 9/64X12 53/64X9 61/64	53 9/64X12 53/64X9 61/64
	Dimension of Carton Box (LXWXH)	inch	56 39/64X16 29/64X13 55/64	56 39/64X16 29/64X13 55/64
	Dimension of Package (LXWXH)	inch	56 47/64X16 37/64X14 7/16	56 47/64X16 37/64X14 7/16
	Net Weight	Ib	44.1	44.1
	Gross Weight	Ib	54	24.5

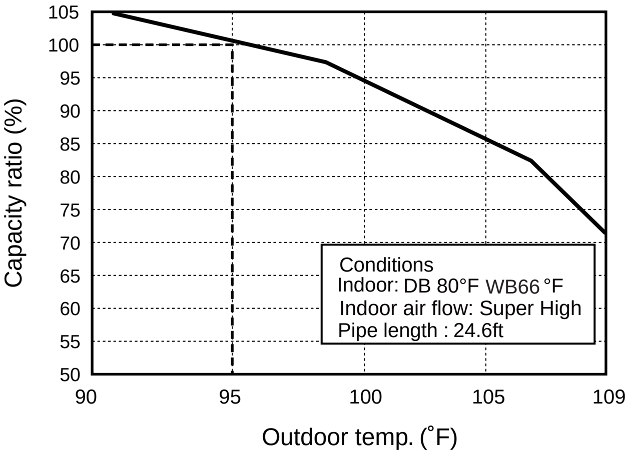
Outdoor Unit	Model of Outdoor Unit		GWC36QF-D3DNB2O/O	GWH36QF-D3DNB2O/O
	Outdoor Unit Product Code		CB432W22900	CB432W23000
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPERSSOR CO.LTD.	ZHUHAI LANDA COMPERSSOR CO.LTD.
	Compressor Model		QXFS-D25zX090H	QXFS-D25zX090H
	Compressor Oil		FW68DA or equivalent	FW68DA or equivalent
	Compressor Type		Rotary	Rotary
	Compressor Locked Rotor Amp (L.R.A)		/	24
	Compressor RLA	A	16.9	16.9
	Compressor Power Input	W	2420	2420
	Overload Protector		HPC115/95U1 KSD115℃	HPC115/95U1 KSD115℃
	Throttling Method		Electron expansion valve	Electron expansion valve
	Operation temp	ºF	61~86	61~86
	Ambient temp (cooling)	ºF	-4~105	-4~105
	Ambient temp (heating)	ºF	/	-13~75
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	inch	Φ9/32	Φ9/32
	Rows-fin Gap	inch	2-1/16	2-1/16
	Coil Length (LXDXW)	inch	37 31/64X1 1/2X29 29/64	37 31/64X1 1/2X29 29/64
	Fan Motor Speed	rpm	880	880
	Output of Fan Motor	W	92	92
	Fan Motor RLA	A	0.7	0.7
	Fan Motor Capacitor	μF	/	/
	Air Flow Volume of Outdoor Unit	CFM	2354	2354
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	inch	Φ21 21/32	Φ21 21/32
	Defrosting Method		/	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Design Pressure(High)	PSIG	550	550
	Design Pressure(Low)	PSIG	240	240
	Sound Pressure Level (H/M/L)	dB (A)	59/-/-	61/-/-
	Sound Power Level (H/M/L)	dB (A)	69/-/-	71/-/-
	Dimension (WXHXD)	inch	39 1/2X31 7/64X16 13/16	39 1/2X31 7/64X16 13/16
	Dimension of Carton Box (LXWXH)	inch	42 1/2X19X33	42 1/2X19X33
	Dimension of Package (LXWXH)	inch	42 21/32X19 13/64X33 21/32	42 21/32X19 13/64X33 21/32
	Net Weight	lb	137.8	140
	Gross Weight	lb	148.8	151
	Refrigerant		R410A	R410A
	Refrigerant Charge	oz	88.2	88.2
Connection Pipe	Length	ft	24.6	24.6
	Gas Additional Charge	oz/ft	0.2	0.2
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	5/8	5/8
	Max Distance Height	ft	32 13/16	32 13/16
	Max Distance Length	ft	82	82
	Note:The connection pipe applies metric diameter.			

The above data is subject to change without notice; please refer to the nameplate of the unit.

2.2 Capacity Variation Ratio According to Temperature

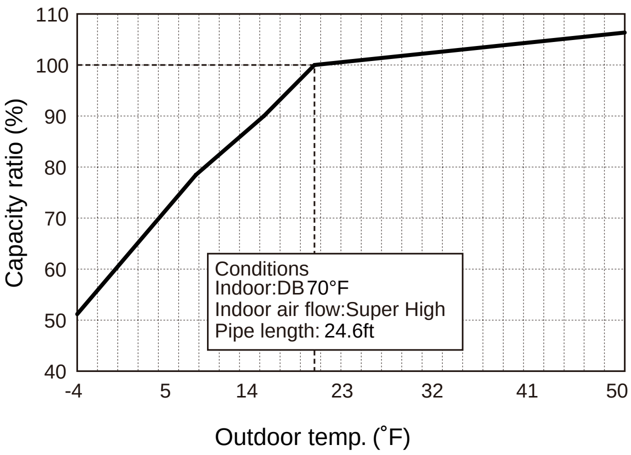
Heating operation ambient temperature range is -4ºF~75ºF

Cooling



Conditions
Indoor: DB 80°F WB66 °F
Indoor air flow: Super High
Pipe length : 24.6ft

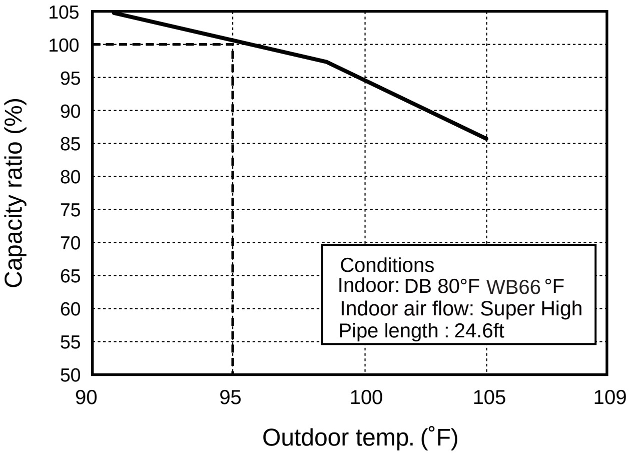
Heating



Conditions
Indoor:DB 70°F
Indoor air flow:Super High
Pipe length: 24.6ft

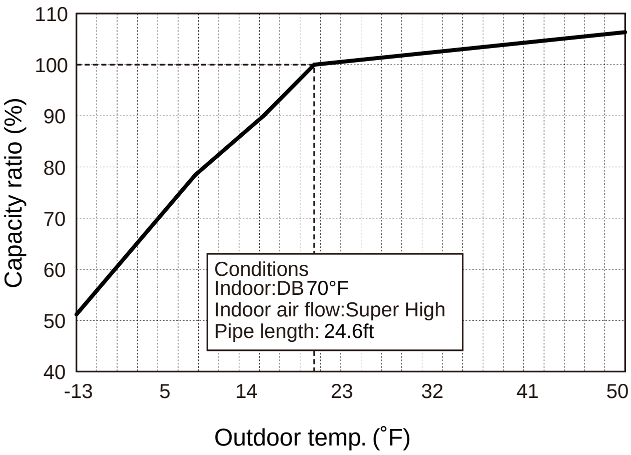
Heating operation ambient temperature range is -13ºF~75ºF

Cooling



Conditions
Indoor: DB 80°F WB66 °F
Indoor air flow: Super High
Pipe length : 24.6ft

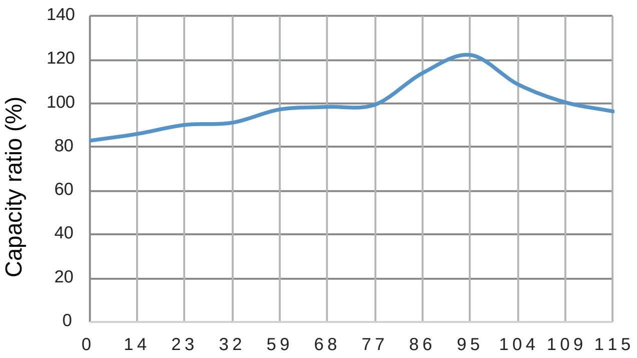
Heating



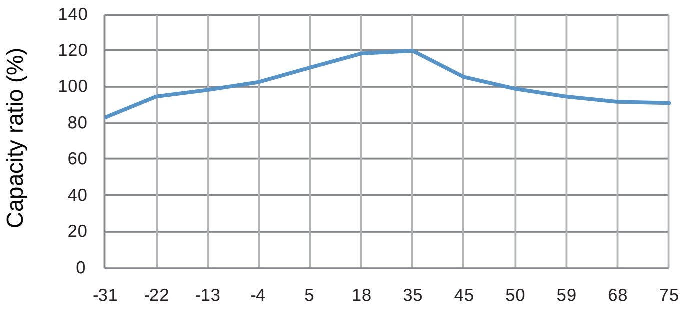
Conditions
Indoor:DB 70°F
Indoor air flow:Super High
Pipe length: 24.6ft

Heating operation ambient temperature range is -31ºF~75ºF

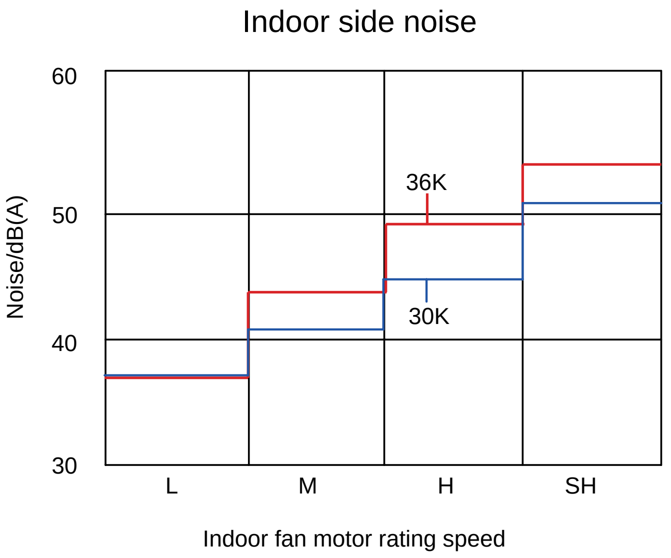
Cooling

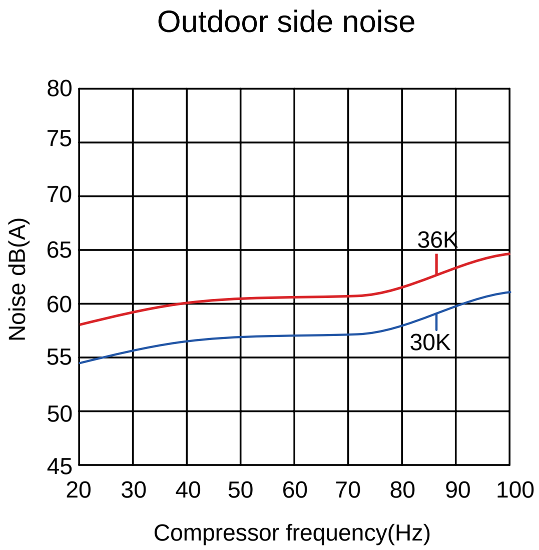


Heating



2.3 Noise Curve





2.4 Cooling and Heating Data Sheet in Rated Frequency

Cooling:

Rated cooling condition(°F) (DB/WB)		Model	Pressure of gas pipe connecting indoor and outdoor unit	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit	Compressor revolution (rps)
Indoor	Outdoor		P (PSIG)	T1 (°F)	T2 (°F)			
80/66	95/-	30K	130~145	46.8 to 52.8	127 to 96.8	Super High	High	46
80/66	95/-	36K	130~145	46.8 to 52.8	127 to 96.8	Super High	High	37

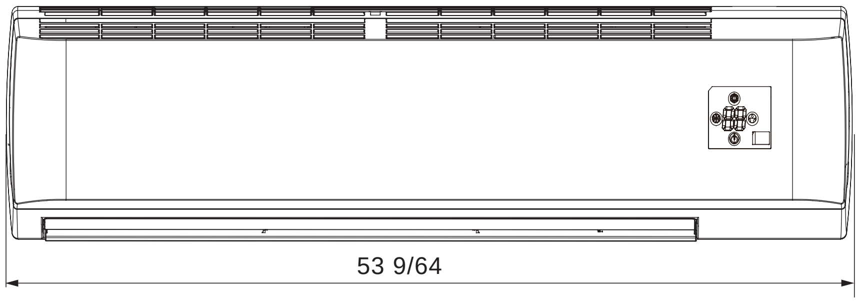
Heating:

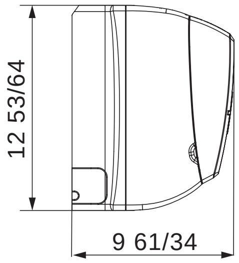
Rated heating condition(°F) (DB/WB)		Model	Pressure of gas pipe connecting indoor and outdoor unit	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit	Compressor revolution (rps)
Indoor	Outdoor		P (PSIG)	T1 (°F)	T2 (°F)			
70/-	20/19	30K	507~550	134.4 to 102	36 to 39	Super High	High	46
70/-	20/19	36K	507~550	134.4 to 102	36 to 39	Super High	High	34

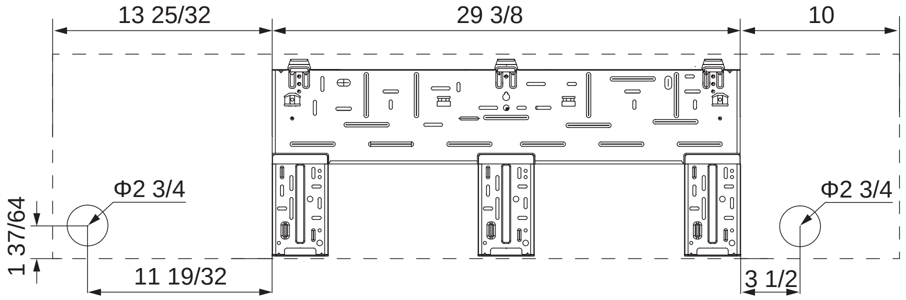
Instruction:
T1: Inlet and outlet pipe temperature of evaporator
T2: Inlet and outlet pipe temperature of condenser
P: Pressure at the side of big valve
Connection pipe length: 24.6ft.

3. Outline Dimension Diagram

3.1 Indoor Unit



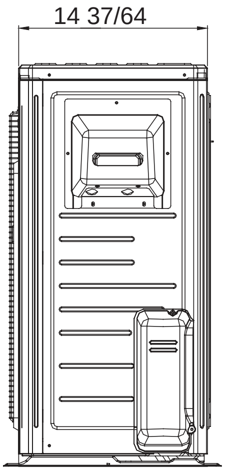

12 53/64
9 61/34

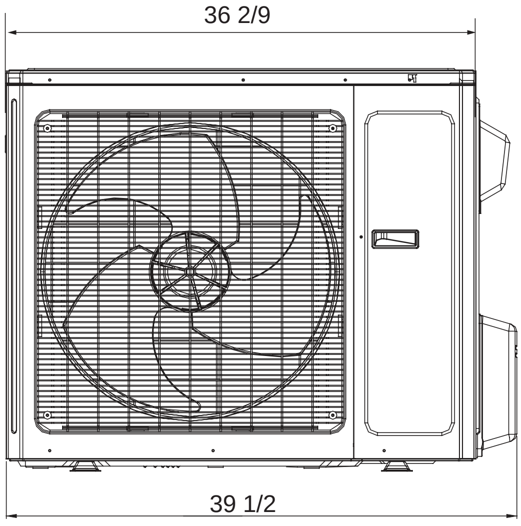

13 25/32
29 3/8
10
Φ2 3/4
Φ2 3/4
1 37/64
11 19/32
3 1/2

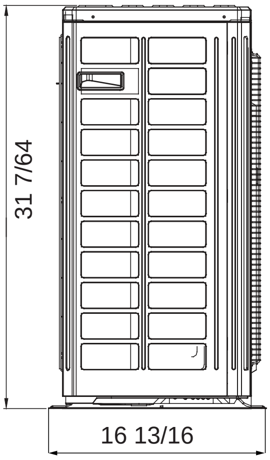
Unit:inch

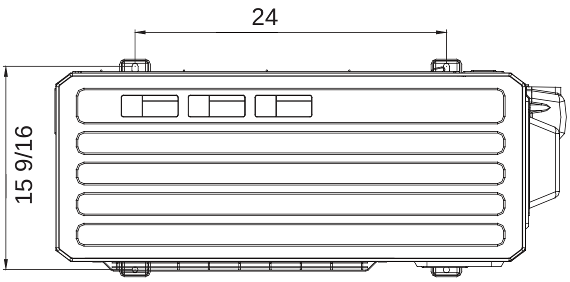
3.2 Outdoor Unit

GWC30LB-D3DNA3G/O GWH30LB-D3DNA3G/O GWC36LB-D3DNA3G/O GWH36LB-D3DNA3G/O
GWH36QF-D3DNB2H/O GWH36QF-D3DNB2J/O GWC30QF-D3DNB2K/O GWH30QF-D3DNB2K/O
GWC36QF-D3DNB2O/O GWH36QF-D3DNB2O/O



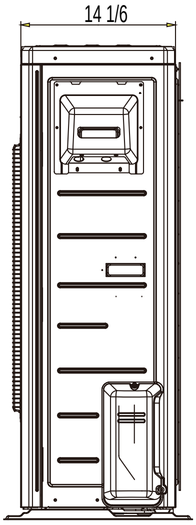


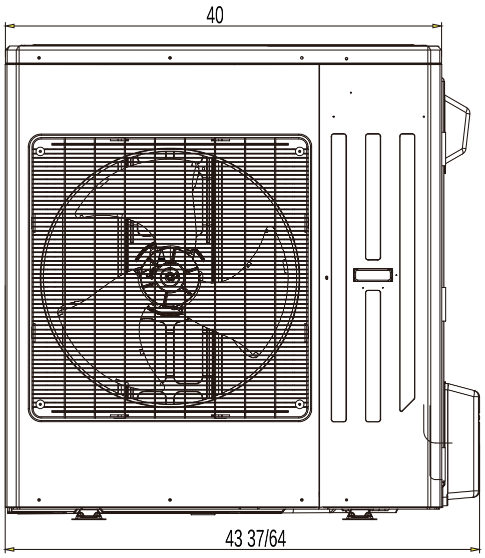

31 7/64
16 13/16

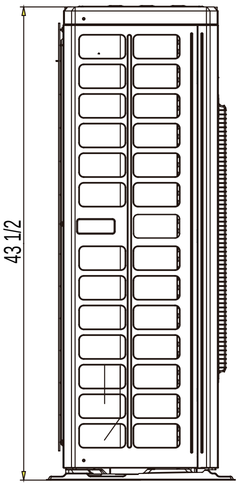


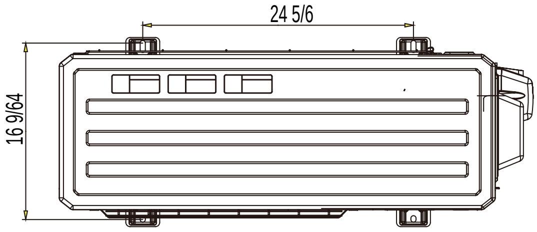
Unit:inch

GWH36QF-D3DNB2I/O
GWH30QF-D3DNB2I/O







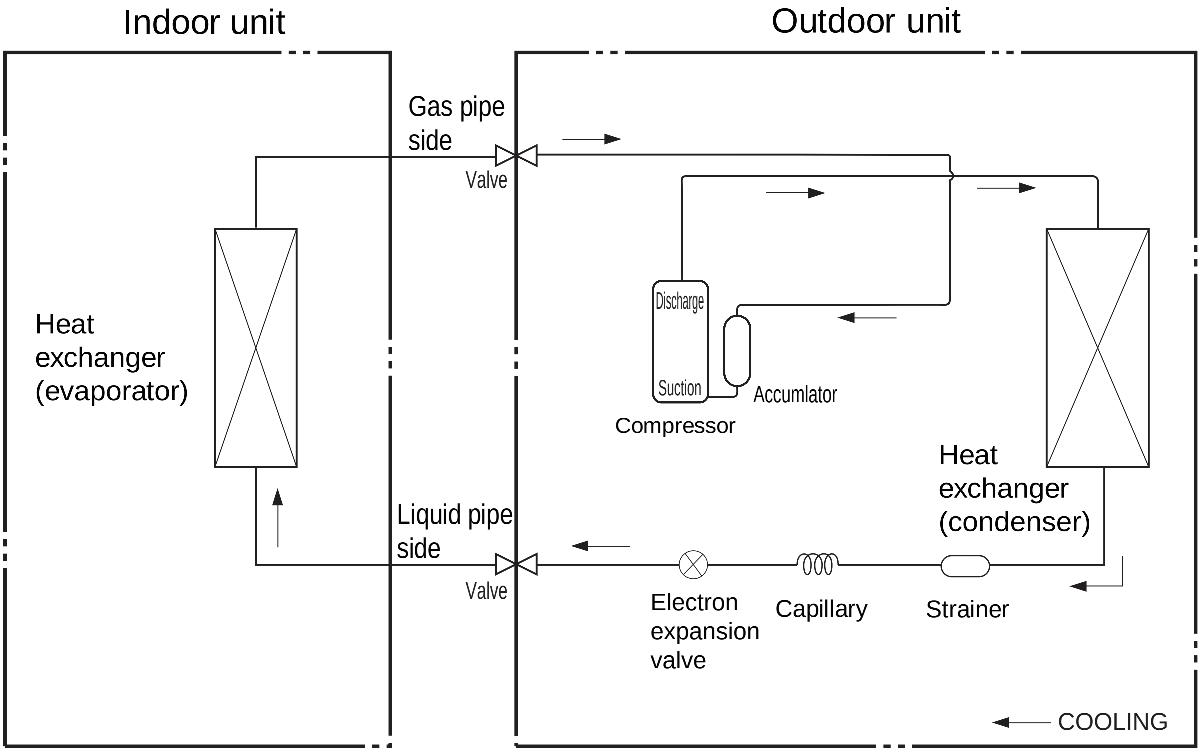


Unit:inch

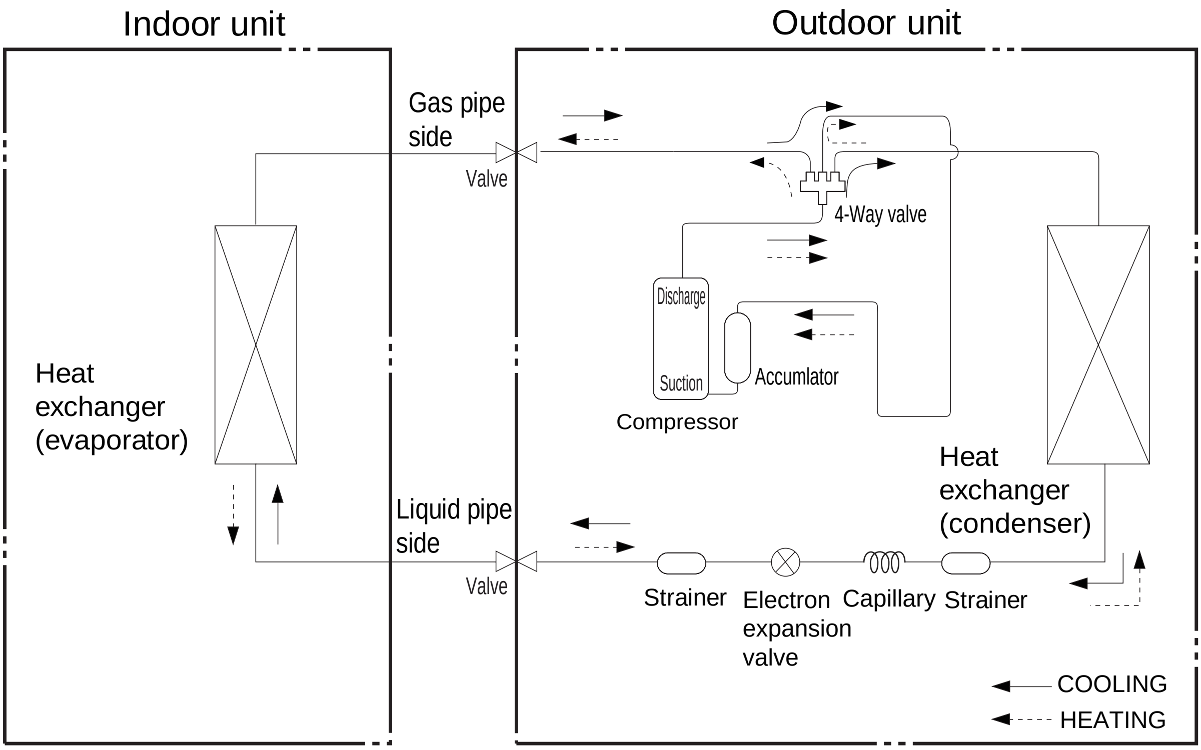
4. Refrigerant System Diagram

30K except :GWH30QF-D3DNB2I

Cooling only model


Indoor unit
Outdoor unit
Gas pipe side
Valve
Discharge
Suction
Accumlator
Compressor
Heat exchanger (evaporator)
Heat exchanger (condenser)
Liquid pipe side
Valve
Electron expansion valve
Capillary
Strainer
COOLING

Cooling and heating model


Indoor unit
Outdoor unit
Gas pipe side
Valve
4-Way valve
Discharge
Suction
Accumlator
Compressor
Heat exchanger (evaporator)
Heat exchanger (condenser)
Liquid pipe side
Valve
Strainer
Electron expansion valve
Capillary
Strainer
COOLING
HEATING

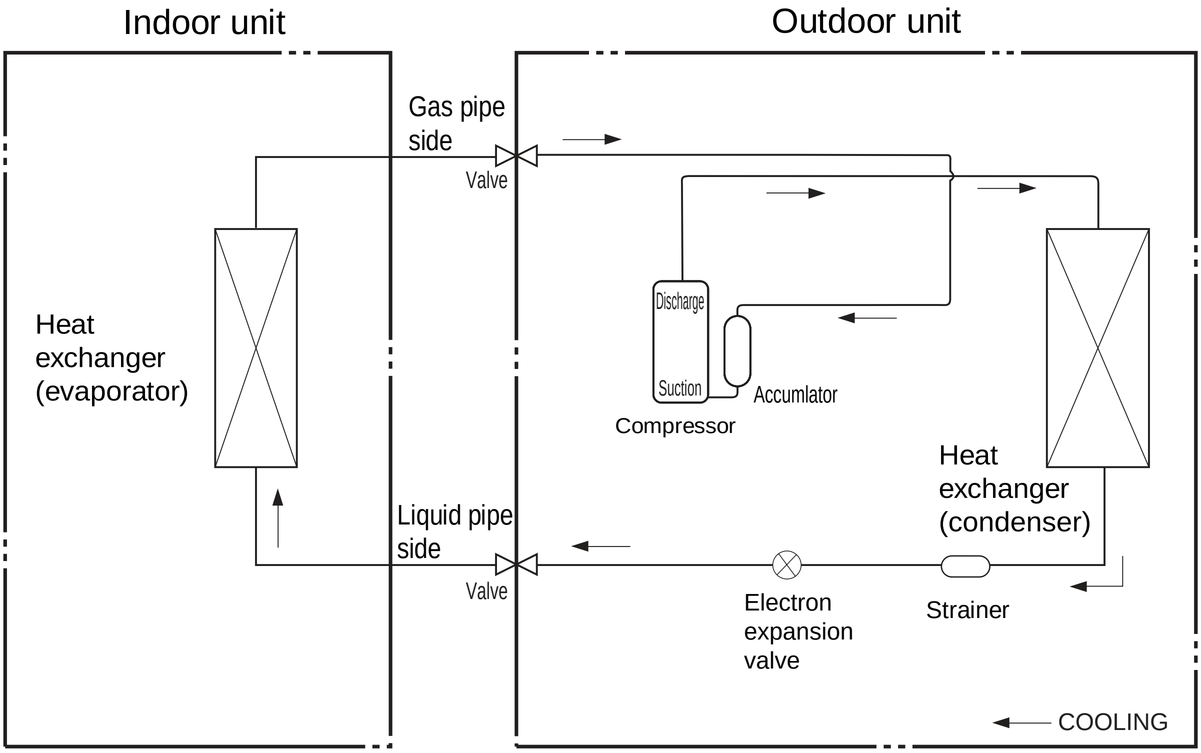
Connection pipe specification:

Liquid pipe:1/4 inch

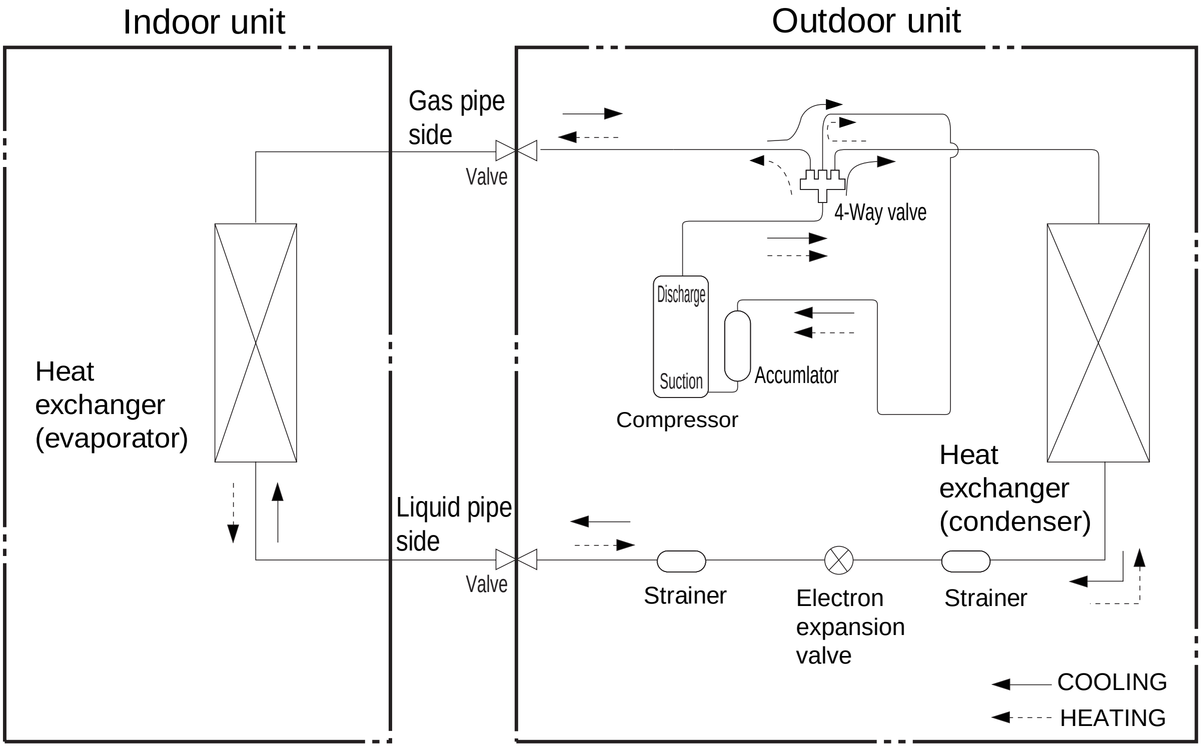
Gas pipe:5/8 inch

36K except GWH36QF-D3DNB2I :

Cooling only model


Indoor unit
Outdoor unit
Gas pipe side
Valve
Heat exchanger (evaporator)
Discharge
Suction
Accumlator
Compressor
Heat exchanger (condenser)
Liquid pipe side
Valve
Electron expansion valve
Strainer
COOLING

Cooling and heating model

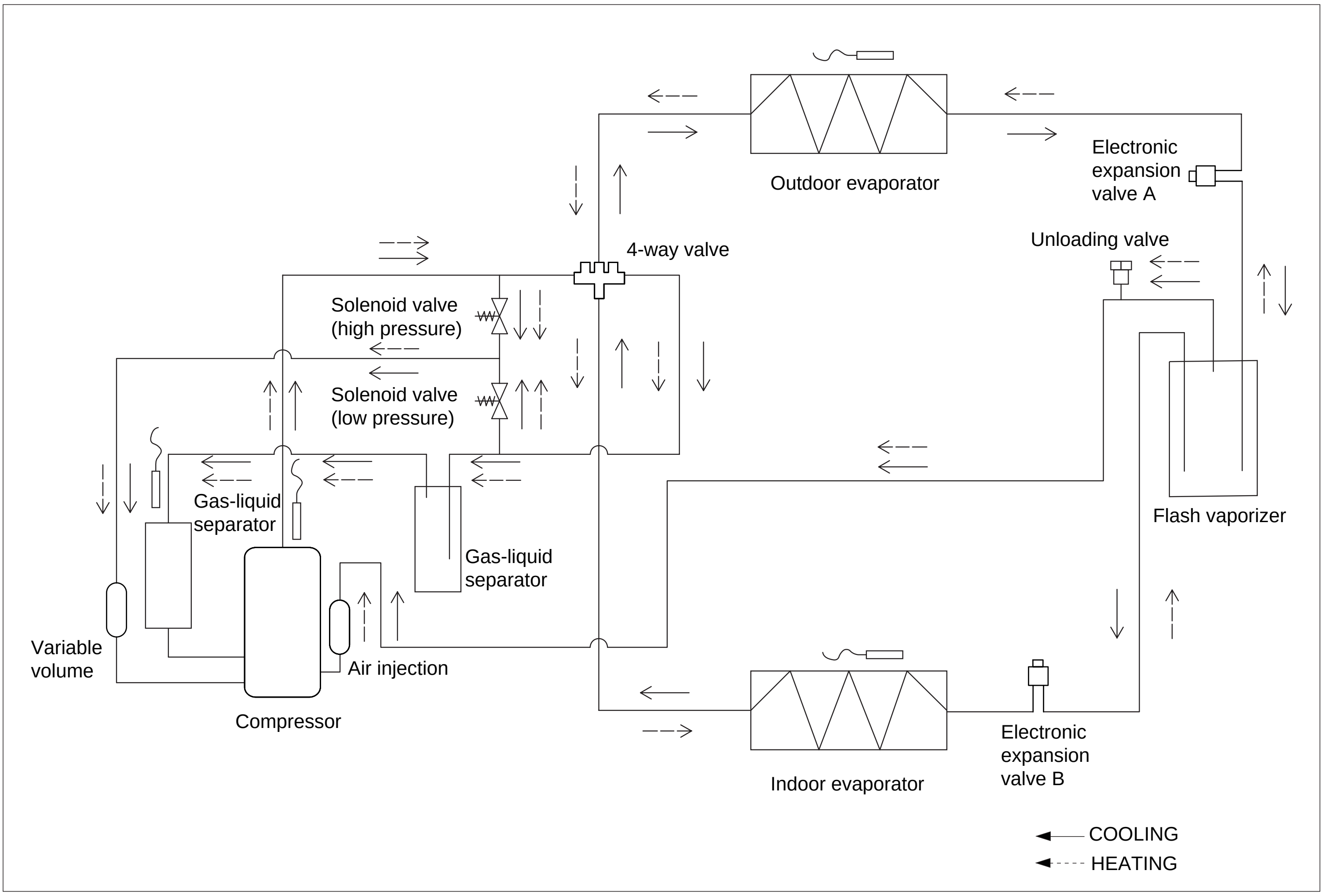

Indoor unit
Outdoor unit
Gas pipe side
Valve
4-Way valve
Heat exchanger (evaporator)
Discharge
Suction
Accumlator
Compressor
Heat exchanger (condenser)
Liquid pipe side
Valve
Strainer
Electron expansion valve
Strainer
COOLING
HEATING

Connection pipe specification:

Liquid pipe:1/4 inch

Gas pipe:5/8 inch

GWH36QF-D3DNB2I GWH30QF-D3DNB2I


Outdoor evaporator
Electronic expansion valve A
Unloading valve
4-way valve
Solenoid valve (high pressure)
Solenoid valve (low pressure)
Gas-liquid separator
Gas-liquid separator
Flash vaporizer
Variable volume
Air injection
Compressor
Indoor evaporator
Electronic expansion valve B
COOLING
HEATING

Connection pipe specification:

Liquid pipe:1/4 inch

Gas pipe:5/8 inch

5. Electrical Part

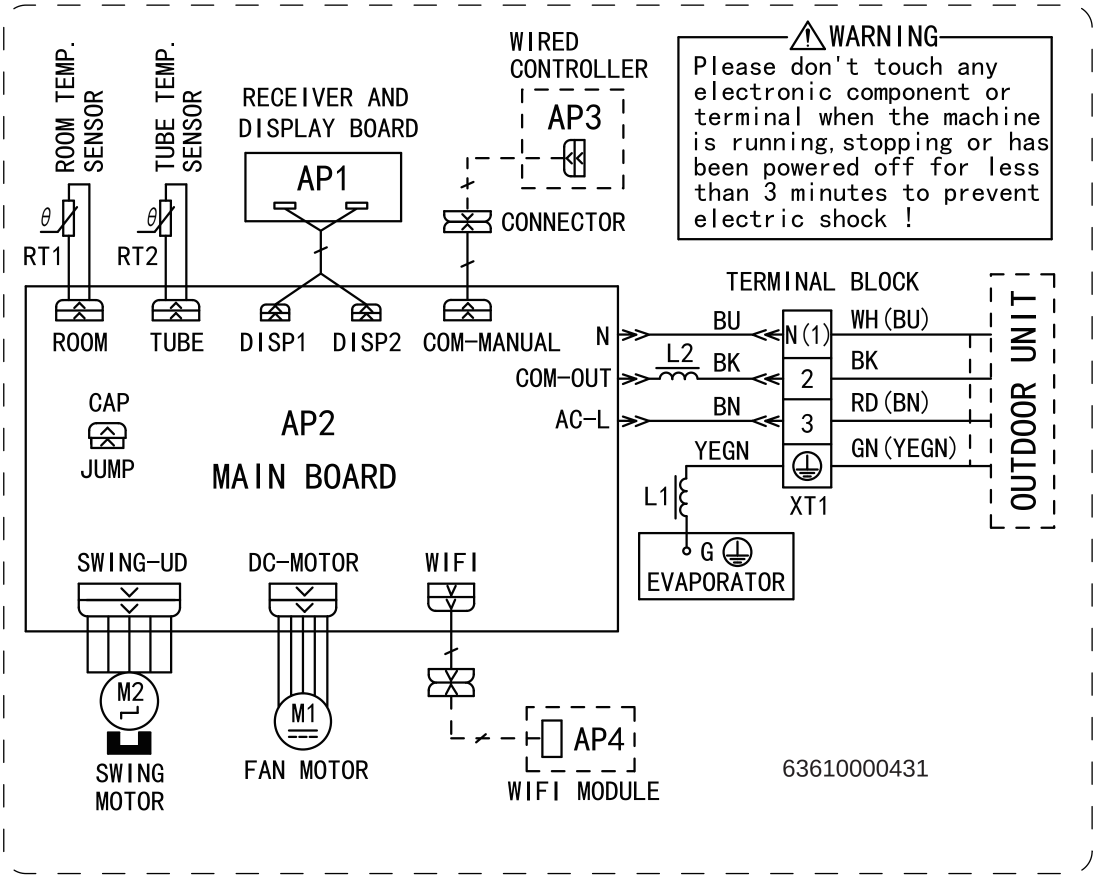
5.1 Wiring Diagram

- **Instruction**

Symbol	Symbol Color	Symbol	Symbol Color	Symbol	Name
WH	White	GN	Green	CAP	Jumper cap
YE	Yellow	BN	Brown	COMP	Compressor
RD	Red	BU	Blue	⏚	Grounding wire
YEGN	Yellow/Green	BK	Black	/	/
VT	Violet	OG	Orange	/	/

Note: Jumper cap is used to determine fan speed and the swing angle of horizontal lover for this model.

- **Indoor Unit**



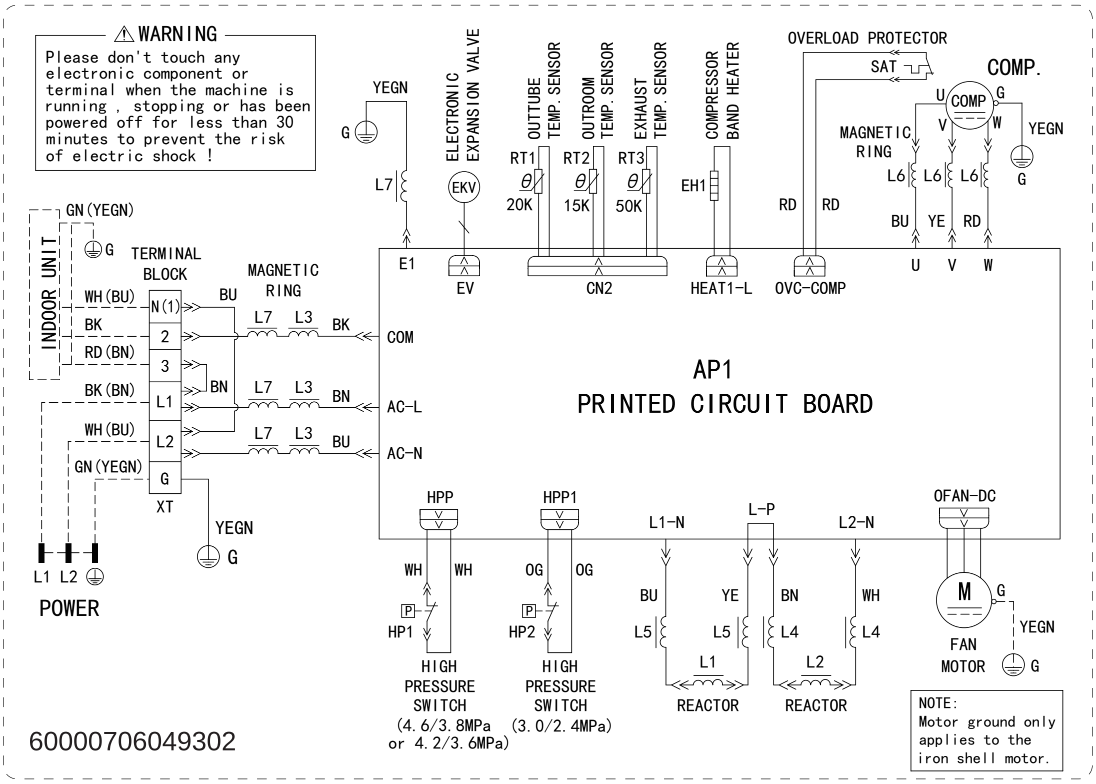
⚠WARNING

Please don't touch any electronic component or terminal when the machine is running, stopping or has been powered off for less than 3 minutes to prevent electric shock !

ROOM TEMP. SENSOR
TUBE TEMP. SENSOR
θ
RT1
RT2
RECEIVER AND DISPLAY BOARD
AP1
WIRED CONTROLLER
AP3
CONNECTOR
ROOM
TUBE
DISP1
DISP2
COM-MANUAL
N
COM-OUT
AC-L
CAP
JUMP
AP2
MAIN BOARD
TERMINAL BLOCK
BU
L2
BK
BN
YEGN
N(1)
2
3
XT1
WH(BU)
BK
RD(BN)
GN(YEGN)
OUTDOOR UNIT
L1
G
EVAPORATOR
SWING-UD
DC-MOTOR
WIFI
M2
M1
SWING MOTOR
FAN MOTOR
AP4
WIFI MODULE
63610000431

● Outdoor Unit

GWC30LB-D3DNA3G/O GWC36LB-D3DNA3G/O



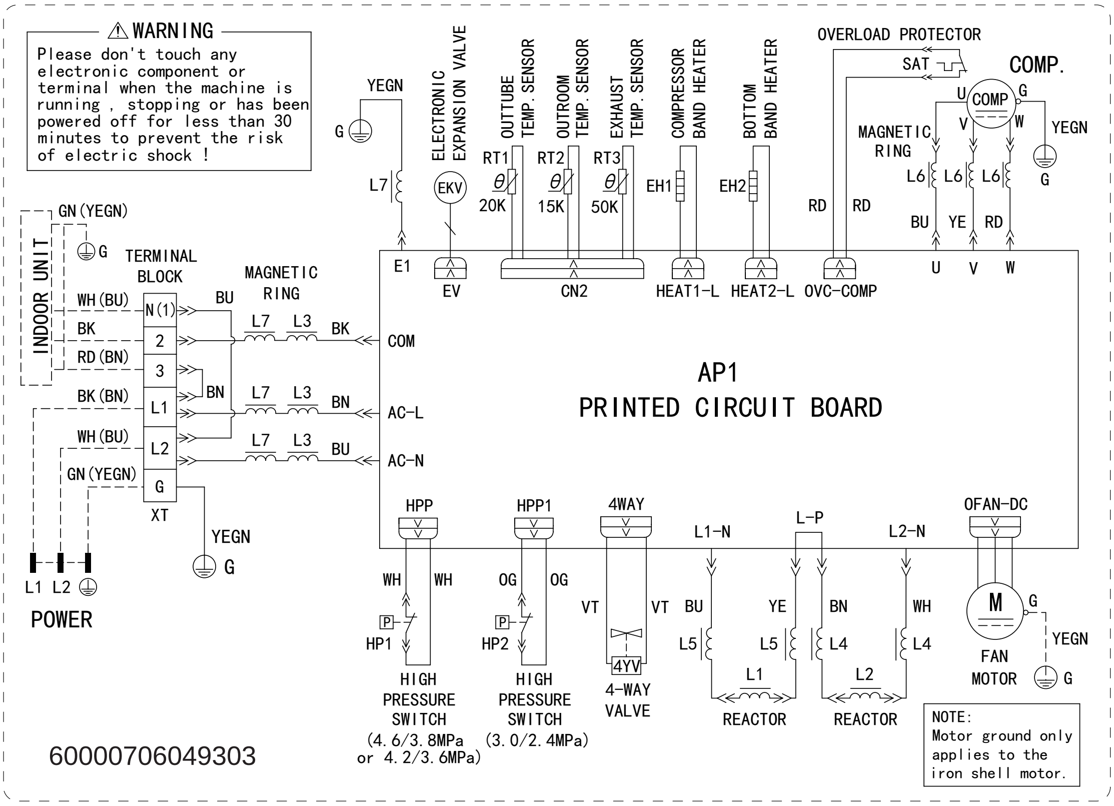
⚠WARNING
Please don't touch any electronic component or terminal when the machine is running, stopping or has been powered off for less than 30 minutes to prevent the risk of electric shock !

NOTE:
Motor ground only applies to the iron shell motor.

60000706049302

INDOOR UNIT
GN(YEGN)
G
TERMINAL BLOCK
WH(BU)
BK
RD(BN)
BK(BN)
WH(BU)
GN(YEGN)
N(1)
2
3
L1
L2
G
XT
MAGNETIC RING
BU
BN
L7
L3
BK
BU
YEGN
G
L1 L2
POWER
YEGN
L7
ELECTRONIC EXPANSION VALVE
EKV
OUTTUBE TEMP. SENSOR
OUTROOM TEMP. SENSOR
EXHAUST TEMP. SENSOR
RT1
RT2
RT3
20K
15K
50K
COMPRESSOR BAND HEATER
EH1
OVERLOAD PROTECTOR
SAT
COMP.
COMP
U
V
W
MAGNETIC RING
L6
RD
YE
E1
EV
CN2
HEAT1-L
OVC-COMP
COM
AC-L
AC-N
AP1
PRINTED CIRCUIT BOARD
HPP
HPP1
L1-N
L-P
L2-N
OFAN-DC
WH
OG
P
HP1
HP2
HIGH PRESSURE SWITCH
(4.6/3.8MPa or 4.2/3.6MPa)
HIGH PRESSURE SWITCH
(3.0/2.4MPa)
L5
L4
L1
L2
REACTOR
REACTOR
M
FAN MOTOR

GWH30LB-D3DNA3G/O GWH36LB-D3DNA3G/O GWH36QF-D3DNB2H/O GWH36QF-D3DNB2J/O



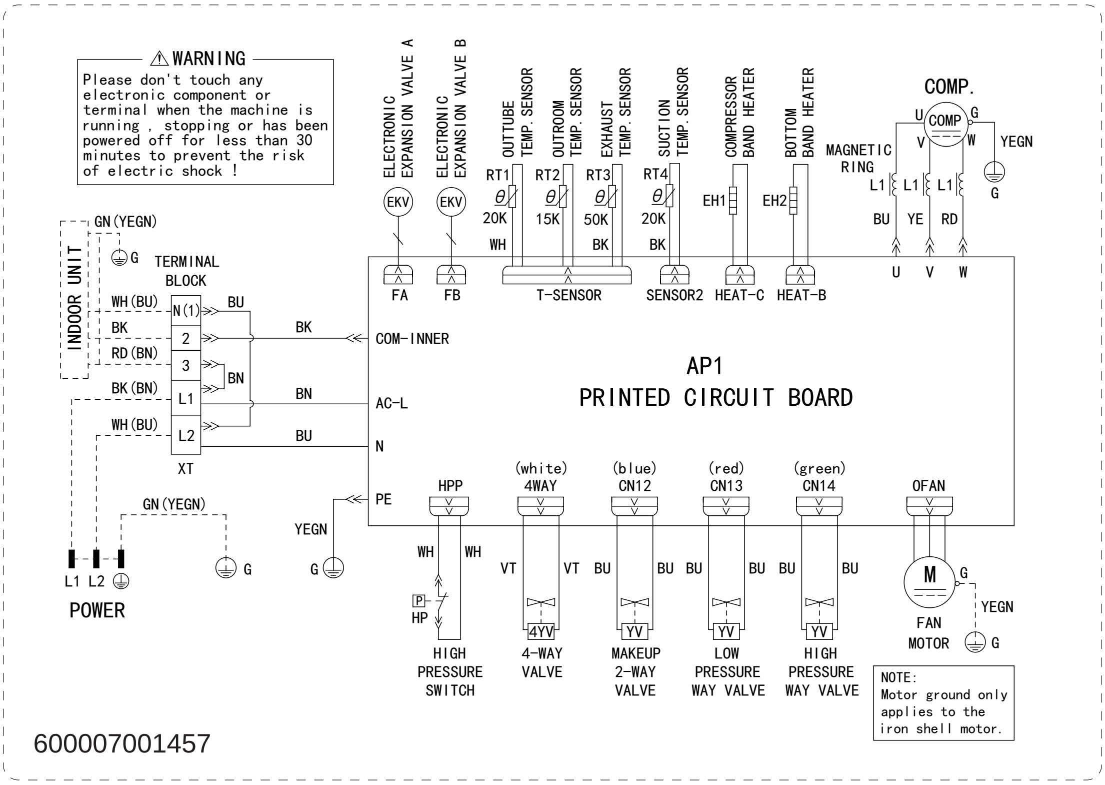
⚠WARNING
Please don't touch any electronic component or terminal when the machine is running, stopping or has been powered off for less than 30 minutes to prevent the risk of electric shock !

NOTE:
Motor ground only applies to the iron shell motor.

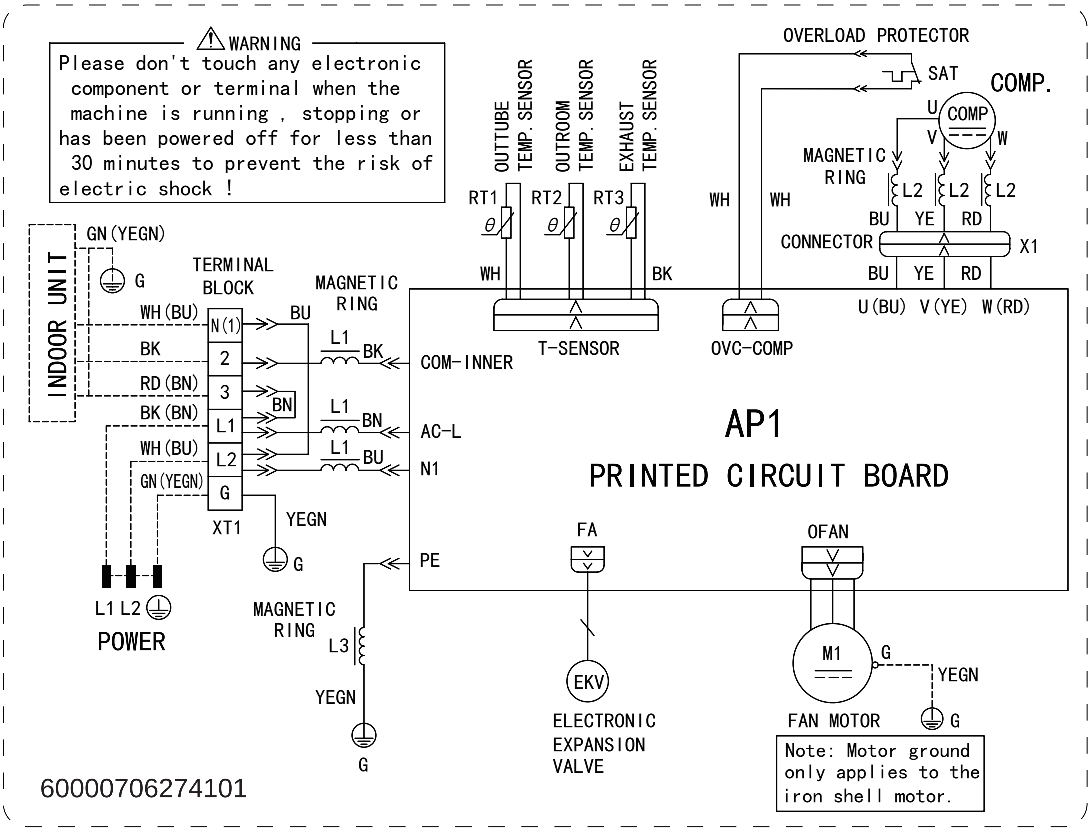
60000706049303

INDOOR UNIT
GN(YEGN)
G
TERMINAL BLOCK
WH(BU)
BK
RD(BN)
BK(BN)
WH(BU)
GN(YEGN)
N(1)
2
3
L1
L2
G
XT
MAGNETIC RING
BU
BN
L7
L3
BK
BU
YEGN
G
L1 L2
POWER
YEGN
L7
ELECTRONIC EXPANSION VALVE
EKV
OUTTUBE TEMP. SENSOR
OUTROOM TEMP. SENSOR
EXHAUST TEMP. SENSOR
RT1
RT2
RT3
20K
15K
50K
COMPRESSOR BAND HEATER
BOTTOM BAND HEATER
EH1
EH2
OVERLOAD PROTECTOR
SAT
COMP.
COMP
U
V
W
MAGNETIC RING
L6
RD
YE
E1
EV
CN2
HEAT1-L
HEAT2-L
OVC-COMP
COM
AC-L
AC-N
AP1
PRINTED CIRCUIT BOARD
HPP
HPP1
4WAY
L1-N
L-P
L2-N
OFAN-DC
WH
OG
VT
4YV
4-WAY VALVE
P
HP1
HP2
HIGH PRESSURE SWITCH
(4.6/3.8MPa or 4.2/3.6MPa)
HIGH PRESSURE SWITCH
(3.0/2.4MPa)
L5
L4
L1
L2
REACTOR
REACTOR
M
FAN MOTOR

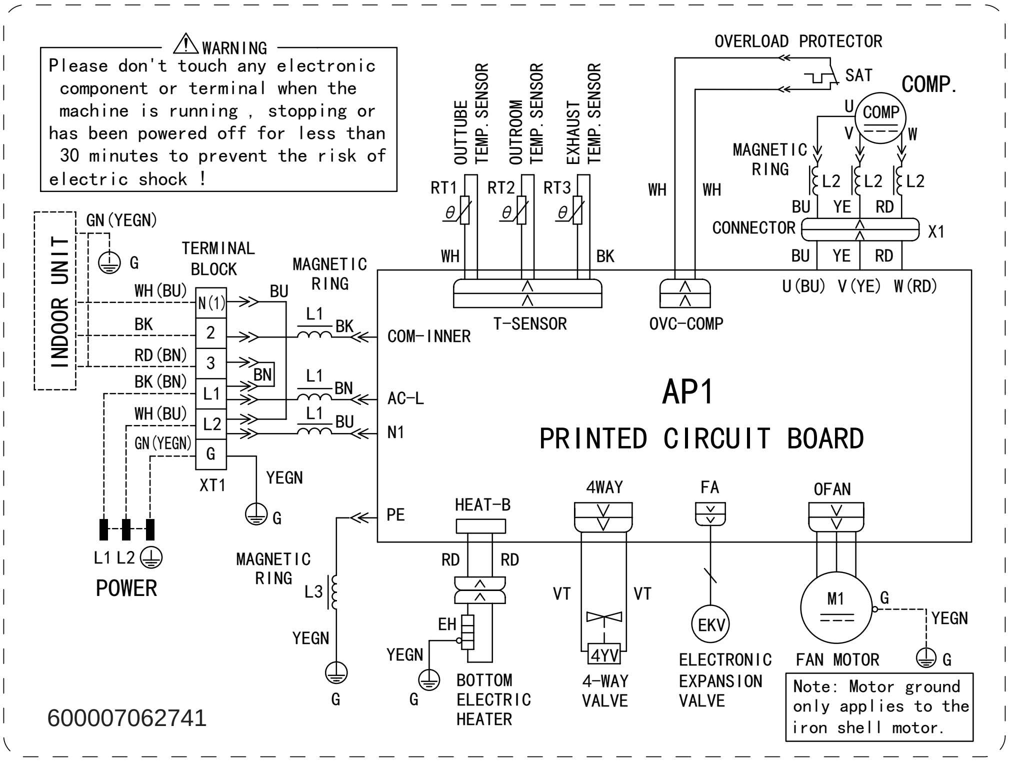
GWH36QF-D3DNB2I/O GWH30QF-D3DNB2I/O


WARNING
Please don't touch any electronic component or terminal when the machine is running , stopping or has been powered off for less than 30 minutes to prevent the risk of electric shock !
ELECTRONIC EXPANSION VALVE A
ELECTRONIC EXPANSION VALVE B
OUTTUBE TEMP. SENSOR
OUTROOM TEMP. SENSOR
EXHAUST TEMP. SENSOR
SUCTION TEMP. SENSOR
COMPRESSOR BAND HEATER
BOTTOM BAND HEATER
COMP.
COMP
U V W G
YEGN
MAGNETIC RING
L1 L1 L1
BU YE RD
U V W
EKV EKV
RT1 RT2 RT3 RT4
20K 15K 50K 20K
WH BK BK
EH1 EH2
FA FB T-SENSOR SENSOR2 HEAT-C HEAT-B
GN(YEGN)
INDOOR UNIT
G
TERMINAL BLOCK
WH(BU) BK RD(BN) BK(BN) WH(BU)
N(1) 2 3 L1 L2
XT
BU BK BN BN BU
COM-INNER
AC-L
N
PE
AP1
PRINTED CIRCUIT BOARD
GN(YEGN)
YEGN
G G
L1 L2
POWER
HPP
(white) 4WAY
(blue) CN12
(red) CN13
(green) CN14
OFAN
WH WH
VT VT BU BU BU BU BU BU
P HP
4YV YV YV YV
HIGH PRESSURE SWITCH
4-WAY VALVE
MAKEUP 2-WAY VALVE
LOW PRESSURE WAY VALVE
HIGH PRESSURE WAY VALVE
M
G
YEGN
FAN MOTOR
G
NOTE: Motor ground only applies to the iron shell motor.
600007001457

GWC30QF-D3DNB2K/O GWC36QF-D3DNB2O/O


WARNING
Please don't touch any electronic component or terminal when the machine is running , stopping or has been powered off for less than 30 minutes to prevent the risk of electric shock !
OUTTUBE TEMP. SENSOR
OUTROOM TEMP. SENSOR
EXHAUST TEMP. SENSOR
OVERLOAD PROTECTOR
SAT
COMP.
COMP
U V W
MAGNETIC RING
L2 L2 L2
BU YE RD
CONNECTOR
X1
BU YE RD
U(BU) V(YE) W(RD)
RT1 RT2 RT3
WH BK
WH WH
T-SENSOR
OVC-COMP
GN(YEGN)
INDOOR UNIT
G
TERMINAL BLOCK
MAGNETIC RING
WH(BU) BK RD(BN) BK(BN) WH(BU) GN(YEGN)
N(1) 2 3 L1 L2 G
XT1
BU
L1 BK
BN
L1 BN
L1 BU
COM-INNER
AC-L
N1
PE
AP1
PRINTED CIRCUIT BOARD
YEGN
G
L1 L2
POWER
MAGNETIC RING
L3
YEGN
G
FA
EKV
ELECTRONIC EXPANSION VALVE
OFAN
M1
G
YEGN
FAN MOTOR
G
Note: Motor ground only applies to the iron shell motor.
60000706274101

GWH30QF-D3DNB2K/O GWH36QF-D3DNB2O/O



⚠WARNING

Please don't touch any electronic component or terminal when the machine is running , stopping or has been powered off for less than 30 minutes to prevent the risk of electric shock !

Note: Motor ground only applies to the iron shell motor.

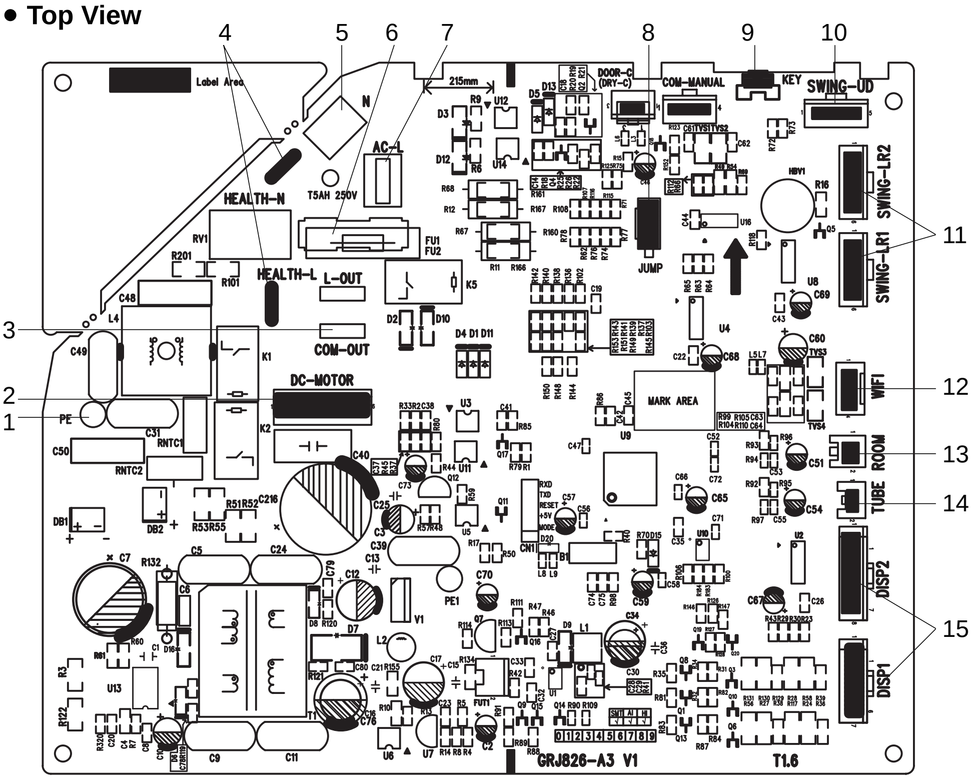
INDOOR UNIT
GN(YEGN)
G
TERMINAL BLOCK
WH(BU)
BK
RD(BN)
BK(BN)
WH(BU)
GN(YEGN)
N(1)
2
3
L1
L2
G
XT1
BN
MAGNETIC RING
BU
L1
BK
BN
BU
COM-INNER
AC-L
N1
PE
YEGN
G
L1 L2
POWER
MAGNETIC RING
L3
YEGN
G
OUTTUBE TEMP.SENSOR
OUTROOM TEMP.SENSOR
EXHAUST TEMP.SENSOR
RT1
RT2
RT3
θ
WH
BK
T-SENSOR
OVERLOAD PROTECTOR
SAT
COMP.
COMP
U
V
W
MAGNETIC RING
L2
WH
WH
BU
YE
RD
CONNECTOR
X1
OVC-COMP
U(BU) V(YE) W(RD)
AP1
PRINTED CIRCUIT BOARD
HEAT-B
RD
RD
EH
YEGN
G
BOTTOM ELECTRIC HEATER
4WAY
VT
VT
4YV
4-WAY VALVE
FA
EKV
ELECTRONIC EXPANSION VALVE
OFAN
M1
G
YEGN
FAN MOTOR
G
600007062741

The above data is subject to change without notice. Please refer to the nameplate of the unit.

5.2 PCB Printed Diagram

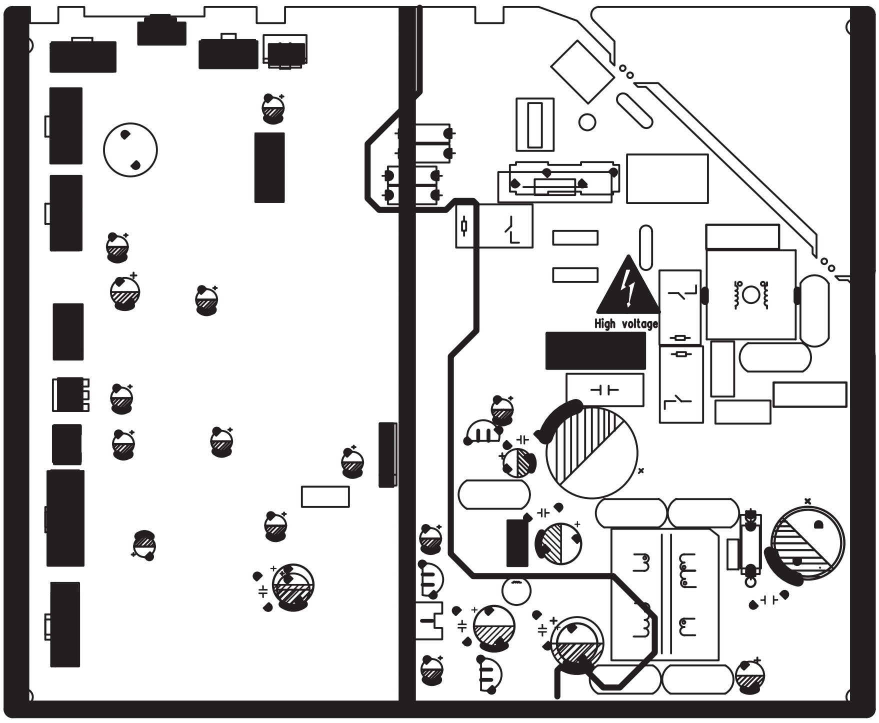
Indoor Unit

- **Top View**


4
5
6
7
8
9
10
11
12
13
14
15
3
2
1
Label Area
215mm
N
AC-L
T5AH 250V
FU1
FU2
HEALTH-N
HEALTH-L
L-OUT
COM-OUT
DC-MOTOR
PE
DOOR-C (DRY-C)
COM-MANUAL
KEY
SWING-UD
SWING-LR2
SWING-LR1
JUMP
MARK AREA
WIFI
ROOM
TUBE
DISP2
DISP1
GRJ826-A3 V1
T1.6

1	Grounding wire
2	DC motor needle stand
3	Communication terminal for outdoor unit
4	Interface of health function(only for the mode with this function)
5	Interface of neutral wire
6	Fuse
7	Interface of live wire
8	Needle stand for jumper cap
9	Auto button
10	up&down swing interface
11	Left&right swing interface
12	Wifi interface
13	Interface of ambient temperature sensor
14	Interface of tube temperature sensor
15	Display interface

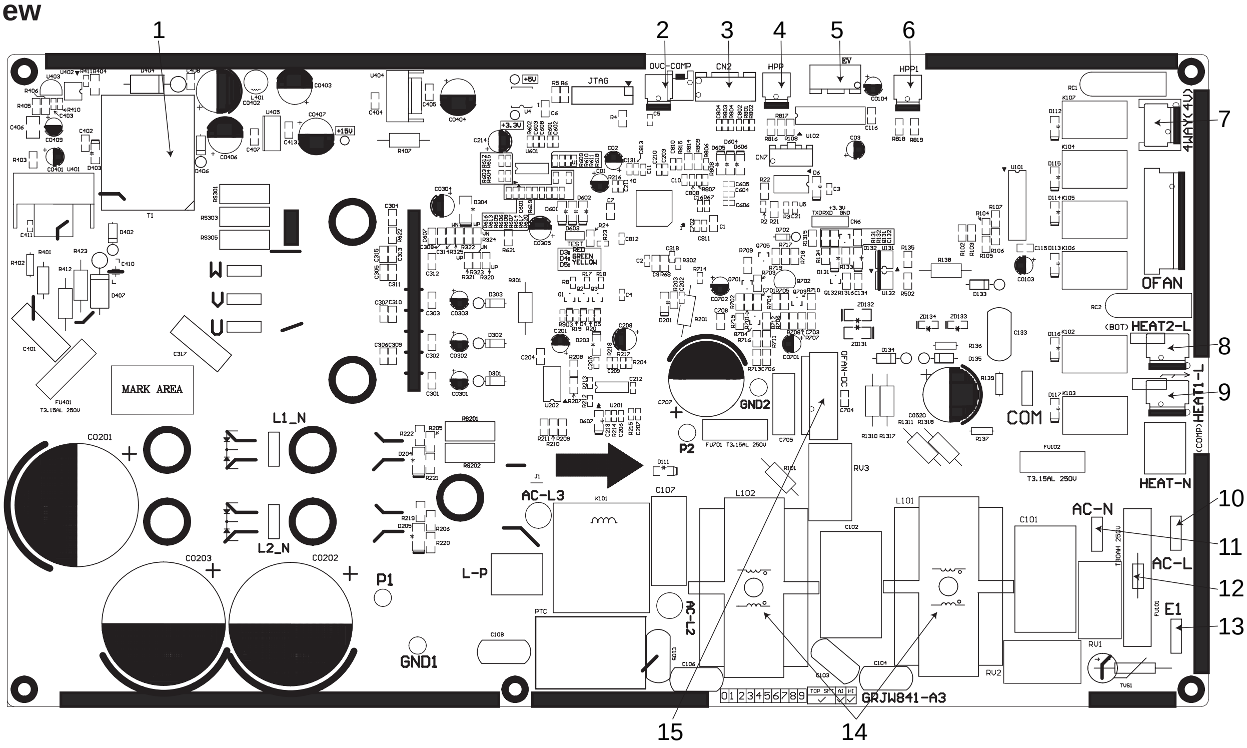
- **Bottom View**


High voltage

Outdoor Unit

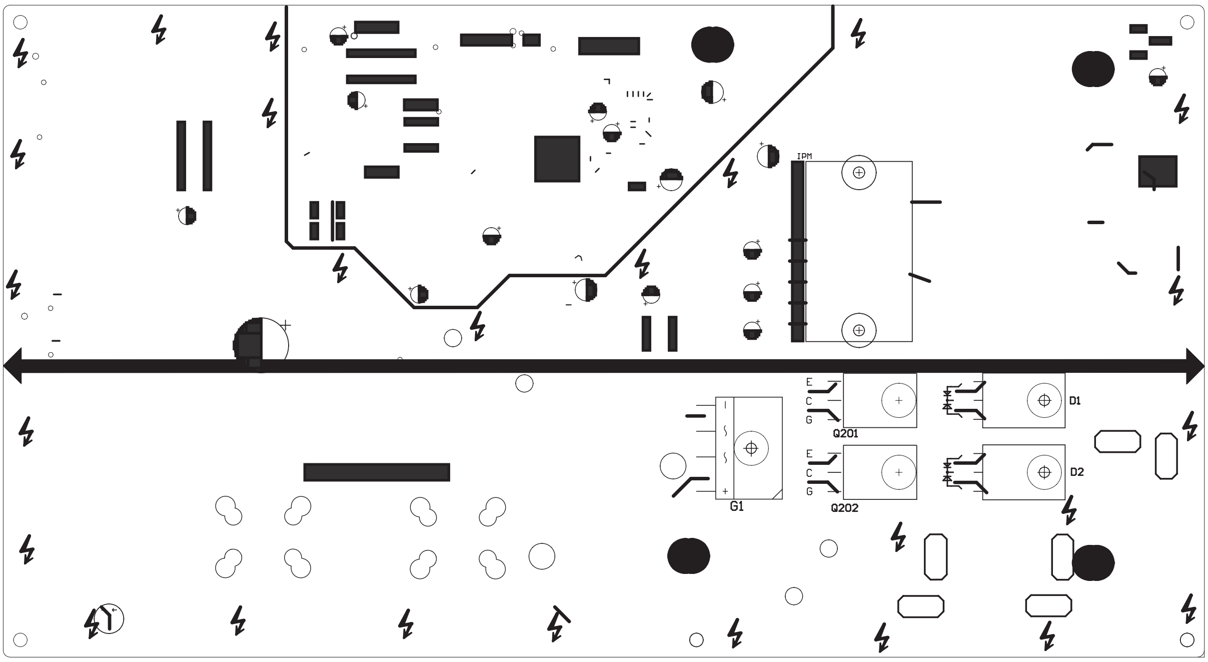
GWC30LB-D3DNA3G/O GWH30LB-D3DNA3G/O GWH36QF-D3DNB2H/O(CB432W08100) GWH36QF-D3DNB2J/O
GWC36LB-D3DNA3G/O GWH36LB-D3DNA3G/O

● Top view


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
OVC-COMP
CN2
HPP
EV
HPP1
JTAG
4WAY(4V)
OFAN
HEAT2-L
HEAT1-L
HEAT-N
AC-N
AC-L
E1
COM
GND2
P2
AC-L3
AC-L2
L-P
P1
GND1
L1_N
L2_N
W
V
U
MARK AREA
OFAN-DC
GRJW841-A3

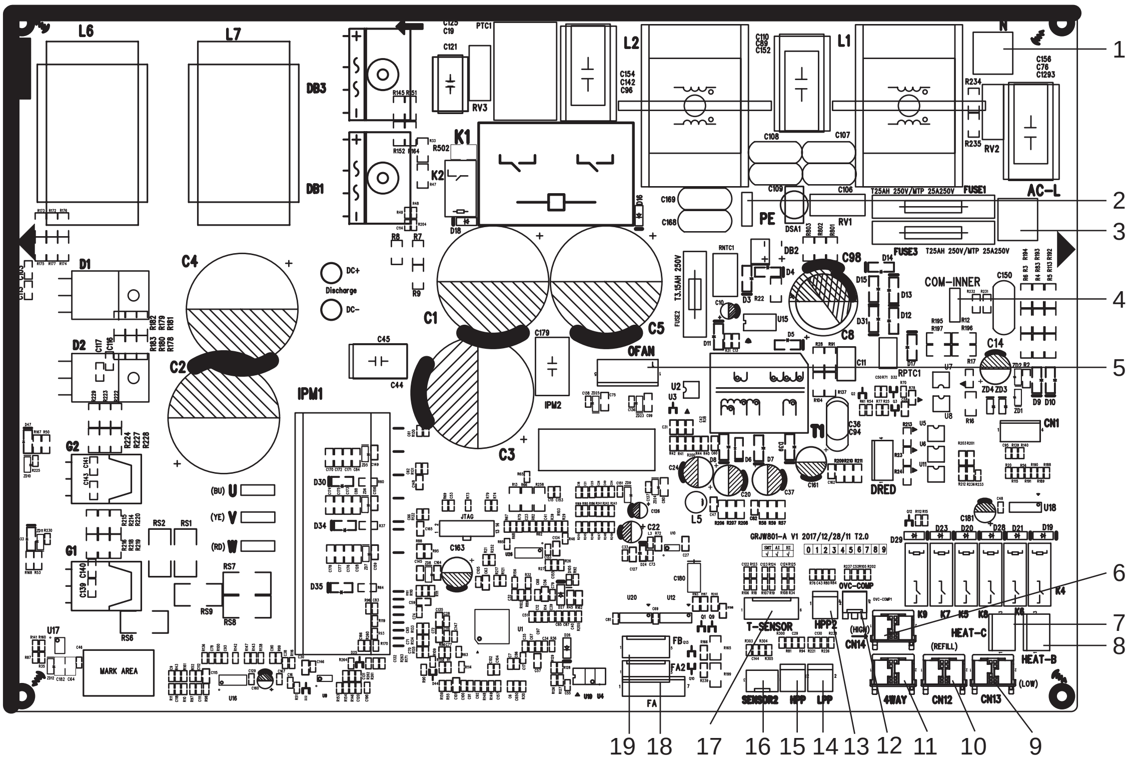
No.	Name	No.	Name	No.	Name
1	High-frequency transformer T1	6	High pressure protection terminal HPP1	11	Terminal of neutral wire
2	Overload protection terminal of compressor OVC-COMP	7	Terminal of 4-way valve	12	Protective tube FU101
3	Terminal of temp sensor CN2	8	Electric heater band of chassis HEAT2-L	13	Terminal of ground wire
4	High pressure protection terminal HPP	9	Electric heater band of compressor HEAT1-L	14	Choke L 101 and L102
5	Electronic expansion valve terminal EV	10	Terminal of live wire	15	Terminal of outdoor fan OFAN-DC

● Bottom view


IPM
Q201
Q202
G1
D1
D2
E
C
G

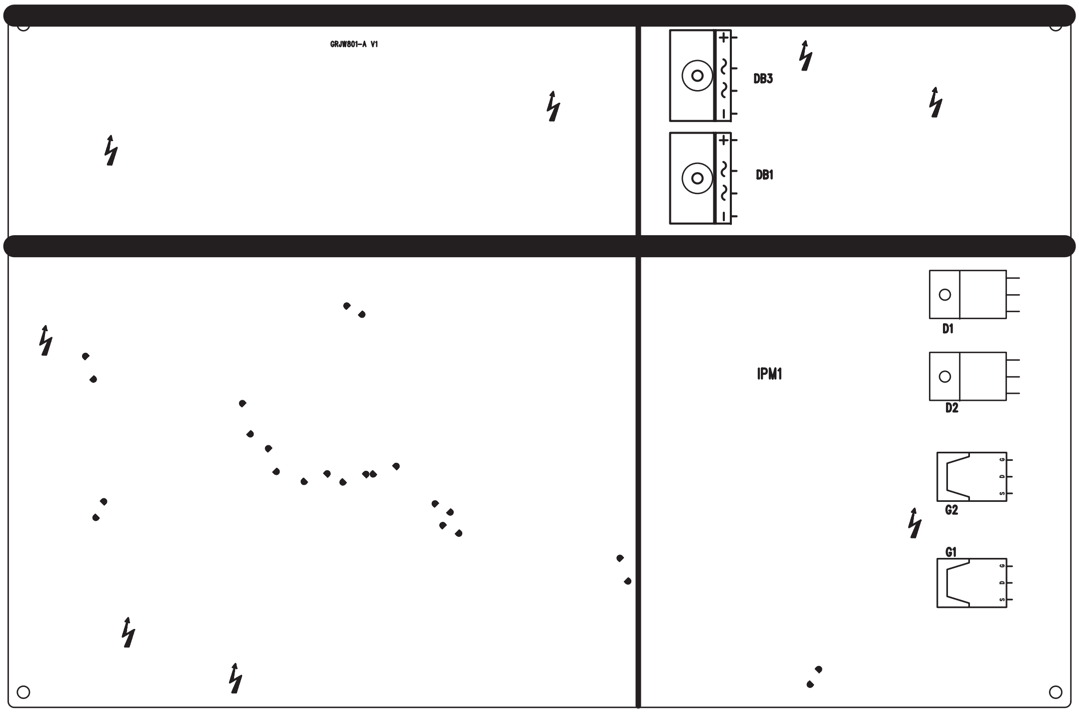
● Top view

GWH36QF-D3DNB2I/O GWH30QF-D3DNB2I/O


1
2
3
4
5
6
7
8
19 18 17 16 15 14 13 12 11 10 9
L6
L7
DB3
DB1
K1
K2
L2
L1
N
AC-L
PE
FUSE1
FUSE3
COM-INNER
C4
C2
C1
C5
C3
C98
C8
C14
D1
D2
G2
G1
IPM1
IPM2
OFAN
T1
DRED
RPTC1
CN1
JTAG
T-SENSOR
HPP2
OVC-COMP
CN14
HEAT-C
HEAT-B
SENSOR2
HPP
LPP
4WAY
CN12
CN13
FA
FB
FA2
MARK AREA
GRJW801-A V1 2017/12/28/11 T2.0

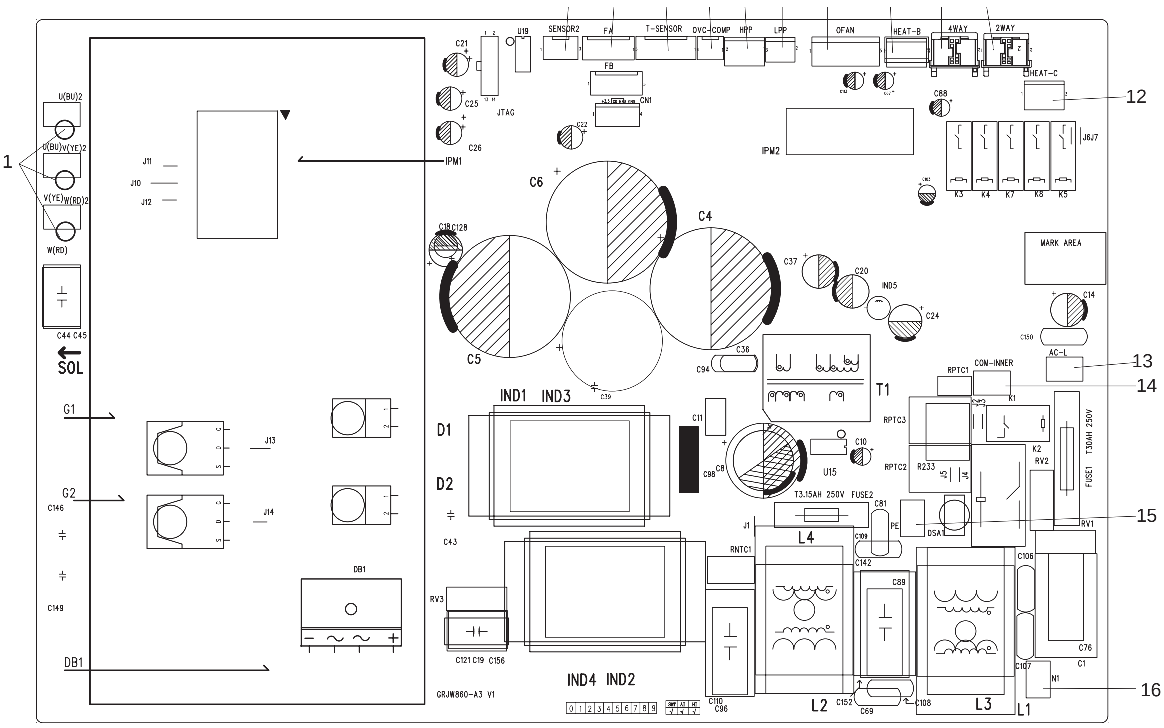
No.	Name	No.	Name	No.	Name
1	Neutral wire	8	Interface B of electric heating	15	Terminal for high pressure protection
2	Grounding wire	9	Terminal of low pressure valve	16	Interface 2 of temperature sensor
3	Live wire	10	Terminal of 2-way valve	17	Interface of temperature sensor
4	Communication interface	11	Terminal of 4-way valve	18	Terminal A of electronic expansion valve
5	Terminal of outdoor fan	12	Terminal of compressor overload protection	19	Terminal B of electronic expansion valve
6	Terminal of high pressure valve	13	Terminal for 2 high pressure protection		
7	Interface C of electric heating	14	Terminal for low pressure protection		

● Bottom view


GRJW801-A V1
DB3
DB1
IPM1
D1
D2
G2
G1

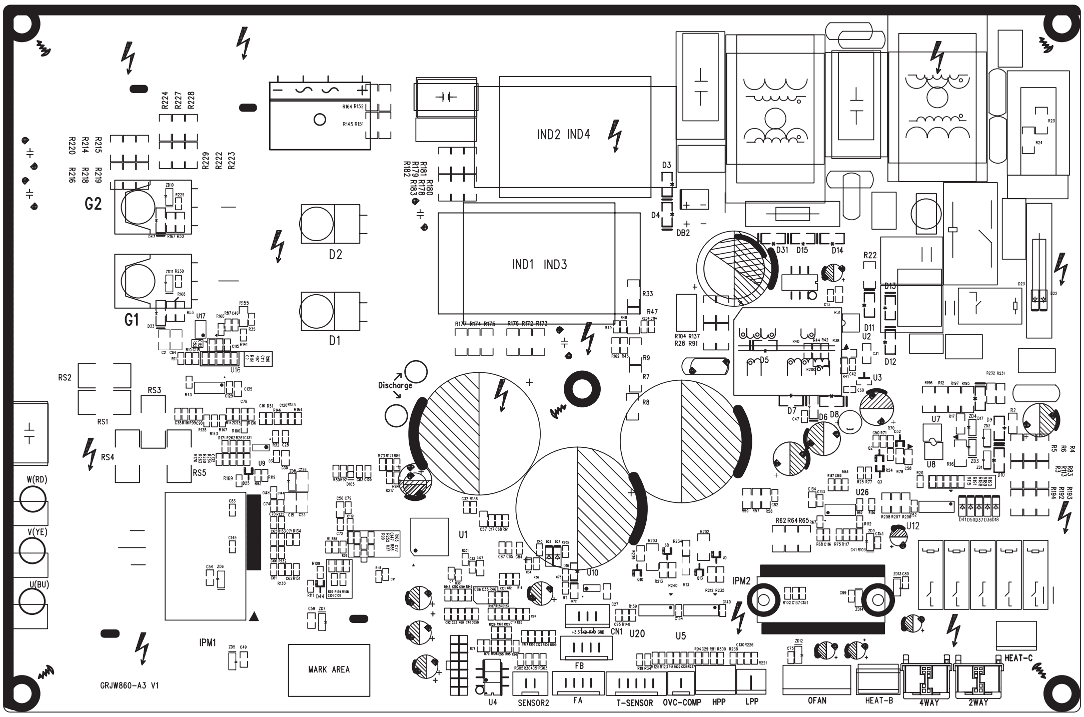
GWC30QF-D3DNB2K/O GWH30QF-D3DNB2K/O

● Top view


2
3
4
5
6
7
8
9
10
11
SENSOR2
FA
T-SENSOR
OVC-COMP
HPP
LPP
OFAN
HEAT-B
4WAY
2WAY
HEAT-C
12
1
U(BU)2
U(BU)
V(YE)2
V(YE)
W(RD)2
W(RD)
IPM1
IPM2
C6
C4
C5
SOL
G1
G2
J13
J14
IND1 IND3
D1
D2
DB1
T1
MARK AREA
AC-L
COM-INNER
13
14
15
16
T3.15AH 250V FUSE2
FUSE1 T30AH 250V
L4
L2
L3
L1
N1
PE
IND4 IND2
GRJW860-A3 V1

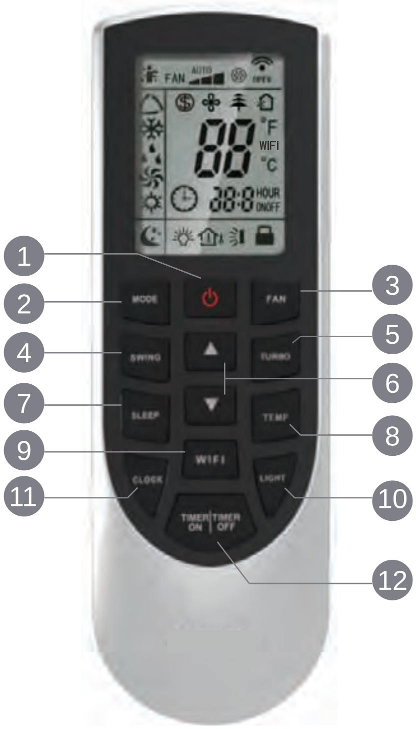
No.	Name
1	Compressor wiring terminal for U V W
2	Suction temperature sensor
3	Terminal of electronic expansion valve
4	Terminal of temperature sensor
5	Overload terminal of compressor
6	Low-pressure protection terminal
7	High-pressure protection terminal
8	Terminal of outdoor fan
9	Interface of electric heating belt of chassis
10	4-way valve
11	2-way valve
12	Terminal of compressor electric heater
13	Live wire
14	Communication wire
15	Earthing wire
16	Neutral wire

● Bottom view


IND2 IND4
IND1 IND3
G2
G1
D2
D1
Discharge
IPM1
IPM2
MARK AREA
GRJW860-A3 V1
W(RD)
V(YE)
U(BU)
U4
SENSOR2
FA
T-SENSOR
OVC-COMP
HPP
LPP
OFAN
HEAT-B
4WAY
2WAY
HEAT-C

6. Function and Control

6.1 Remote Controller Introduction of YAN1F6F(WiFi)


1
2
4
7
9
11
3
5
6
8
10
12
MODE
FAN
SWING
TURBO
SLEEP
TEMP
WIFI
CLOCK
LIGHT
TIMER ON | TIMER OFF

① ON/OFF button

② MODE button

③ FAN button

④ SWING button

⑤ TURBO button

⑥ ▲/ ▼button

⑦ SLEEP button

⑧ TEMP button

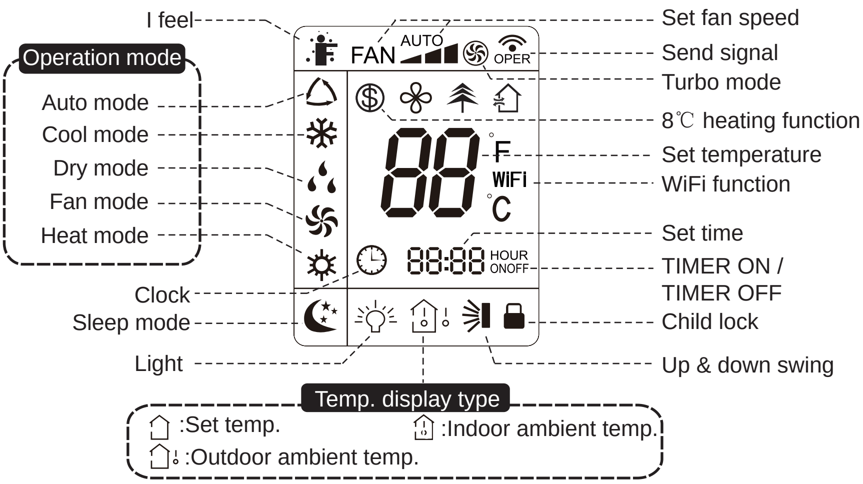
⑨ WIFI button

⑩ LIGHT button

⑪ CLOCK button

⑫ TIMER ON / TIMER OFF button

Introduction for icons on display screen


I feel
Operation mode
Auto mode
Cool mode
Dry mode
Fan mode
Heat mode
Clock
Sleep mode
Light
FAN
AUTO
OPER
88
°F
WiFi
°C
88:88
HOUR
ONOFF
Set fan speed
Send signal
Turbo mode
8℃ heating function
Set temperature
WiFi function
Set time
TIMER ON /
TIMER OFF
Child lock
Up & down swing
Temp. display type
:Set temp.
:Indoor ambient temp.
:Outdoor ambient temp.

Introduction for buttons on remote controller

Note:

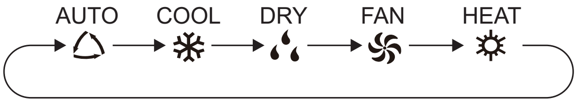
- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Operation indicator "⏻" is ON (red indicator, the colour is different for different models). After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a "de" sound, which means the signal has been sent to the air conditioner.
- Under off status, set temperature and clock icon will be displayed on the display of remote controller (If timer on, timer off and light functions are set, the corre-sponding icons will be displayed on the display of remote controller at the same time); Under on status, the display will show the corresponding set function icons.

1. ON/OFF button

Press this button to turn on the unit. Press this button again to turn off the unit.

2. MODE button

Press this button to select your required operation mode.



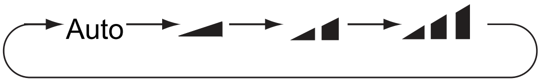
- When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Set temperature can't be adjusted and will not be displayed as well. Press "FAN" button can adjust fan speed. Press "SWING" button can adjust fan blowing angle.
- After selecting cool mode, air conditioner will operate under cool mode. Cool indicator on indoor unit is ON(This indicator is not available for some models). Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle.
- When selecting dry mode, the air conditioner operates at low speed under dry mode. Dry indicator on indoor unit is ON(This indicator is not available for some models). Under dry mode, fan speed can't be adjusted. Press "SWING" button to adjust fan blowing angle.
- When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle.
- When selecting heating mode, the air conditioner operates under heat mode. Heat indicator on indoor unit is ON(This indicator is not available for some models).Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle. (Cooling only unit won't receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can't start up the unit).

Note:

- For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).
- Set temperature range from remote controller: 16~30℃ ; Fan speed: auto, low speed, medium speed, high speed.

3. FAN button

Pressing this button can set fan speed circularly as: auto (AUTO), low(◢) ,medium(◢◢), high(◢◢▮).



Note:

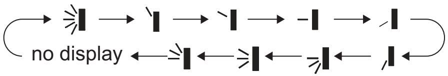
- Under AUTO speed, air conditioner will select proper fan speed automatically according to ex-factory setting.
- Fan speed under dry mode is low speed.
- X-FAN function:Hold fan speed button for 2s in COOL or DRY mode, the icon "✤" is displayed and the indoor fan will continue operation for a few minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

This function indicates that moisture on evaporator of indoor unit will be blowed after the unit is stopped to avoid mould.

- Having set X-FAN function on:After turning off the unit by pressing ON/OFF button indoor fan will continue running for a few minutes.at low speed.In this period,Hold fan speed button for 2s to stop indoor fan directly.
- Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

4. SWING button

Press this button can select up&down swing angle. Fan blow angle can be selected circularly as below:



(horizontal louvers stops at current position)

- When selecting " ⫶▮ ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.
- When selecting "╲▮ 、 ╲▮ 、 –▮ 、 ╱▮ 、 ╱▮", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.
- When selecting " ⫶▮、⫶▮、⫶▮ " , air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.
- Hold " ⫶▮ "button above 2s to set your required swing angle. When reaching your required angle, release the button.

Note:

- "⫶▮、⫶▮、⫶▮" may not be available. When air conditioner receives this signal, the air conditioner will blow fan automatically.

5. TURBO button

Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. " ֍ " icon is displayed on remote controller. Press this button again to exit turbo function and " ֍ " icon will disappear.

6. ▲/▼ button

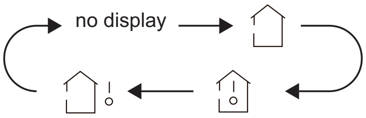
- Press "▲" or "▼" button once increase or decrease set temperature 1℃(1°F). . Holding "▲" or " ▼" button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly. (Temperature can't be adjusted under auto mode)
- When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▼" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

7. SLEEP button

Under COOL, HEAT or DRY mode, press this button to start up sleep function. " ☾ " icon is displayed on remote controller. Press this button again to cancel sleep function and " ☾ " icon will disappear.

8. TEMP button

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor units display. The setting on remote controlleris selected circularly as below:



- When selecting " ⌂ " or no display with remote controller, temperature indicator on indoor unit displays set temperature.
- When selecting " ⌂ " with remote controller, temperature indicator on indoor unit displays indoor ambient temperature.
- When selecting " ⌂ " with remote controller, temperature indicator on indoor unit displays outdoor ambient temperature.

Note:

- Outdoor temperature display is not available for some models. At that time, indoor unit receives " ⌂ "signal, while it displays indoor set temperature.
- Its defaulted to display set temperature when turning on the unit.There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When selecting displaying of indoor or outdoor ambient temperature, indoor temperature indicator displays corresponding temperature and automatically turn to display set temperature after three or five seconds.

9. WIFI button

Press " **WiFi** " button to turn on or turn off WiFi function. When WiFi function is turned on, the " **WiFi** " icon will be displayed on remote controller; Under status of remote controller off, press "**MODE**" and " **WiFi** " buttons simultaneously for 1s,WiFi modulewill restore to factory default setting.

10. LIGHT button

Press this button to turn off display light on indoor unit. " 💡 " icon on remote controller disappears. Press this button again to turn on display light. " 💡 " icon is displayed.

11. CLOCK button

Press this button to set clock time. " 🕒 " icon on remote controller will blink. Press "▲" or "▼" button within 5s to set clock time. Each pressing of "▲" or "▼" button, clock time will increase or decrease 1 minute. If hold "▲" or "▼" button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. " 🕒 " icon stops blinking.

Note:

- Clock time adopts 24-hour mode.
- The interval between two operation cant exceeds 5s. Otherwise, remote controller will quit setting status. Operation for TIMER ON/TIMER OFF is the same.

12. TIMER ON / TIMER OFF button

- TIMER ON button

  "TIMER ON" button can set the time for timer on. After pressing this button, " 🕒 " icon disappears and the word "ON" on remote controller blinks. Press "▲" or "▼"button to adjust TIMER ON setting. After each pressing "▲" or "▼" button, TIMER ON setting will increase or decrease 1min. Hold "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time. Press "TIMER ON" to confirm it. The word "ON" will stop blinking. " 🕒 " icon resumes displaying. Cancel TIMER ON: Under the condition that TIMER ON is started up, press "TIMER ON" button to cancel it.
- TIMER OFF button

  "TIMER OFF" button can set the time for timer off. After pressing this button," 🕒 " icon disappears and the word "OFF" on remote controller blinks. Press "▲" or "▼" button to adjust TIMER OFF setting. After each pressing "▲" or "▼" button,
  TIMER OFF setting will increase or decrease 1min. Hold "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time. Press "TIMER OFF" word "OFF" will stop blinking. " 🕒 " icon resumes displaying. Cancel TIMER OFF. Under the condition that TIMER OFF is started up, press "TIMER OFF" button to cancel it.

Note:
- Under on and off status, you can set TIMER OFF or TIMER ON simultaneously.
- Before setting TIMER ON or TIMER OFF, please adjust the clock time.
- After starting up TIMER ON or TIMER OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. ON/OFF button has no effect on setting. If you dont need this function, please use remote controller to cancel it.

Function introduction for combination buttons

1. Energy-saving function

Under cooling mode, press "TEMP" and " CLOCK" buttons simultaneously to start up or turn off energy-saving function. When energy-saving function is started up, "SE" will be shown on remote controller, and air conditioner will adjust the set temperature automatically according to ex-factory setting to reach to the best energy-saving effect. Press "TEMP" and "CLOCK"buttons simultaneously again to exit energy-saving function.

Note:
- Under energy-saving function, fan speed is defaulted at auto speed and it can’t be adjusted.
- Under energy-saving function, set temperature can’t be adjusted. Press "TURBO"button and the remote controller won’t send signal.
- Sleep function and energy-saving function can’t operate at the same time. If energy-saving function has been set under cooling mode, press sleep button will cancel energy-saving function. If sleep function has been set under cooling mode, start up the energy-saving function will cancel sleep function.

2. 8 ℃ heating function

Under heating mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off 8℃ heating function. When this function is started up, " $ " and "8℃ " will be shown on remote controller, and the air conditioner keep the heating status at 8℃ . Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8℃ heating function.

Note:
- Under 8℃ heating function, fan speed is defaulted at auto speed and it can’t be adjusted.
- Under 8℃ heating function, set temperature can’t be adjusted. Press"TURBO" button and the remote controller won’t send signal.
- Sleep function and 8℃ heating function can’t operate at the same time. If 8℃ heating function has been set under cooling mode, press sleep button will cancel 8℃ heating function. If sleep function has been set under cooling mode, start up the 8℃ heating function will cancel sleep function.
- Under ℉ temperature display, the remote controller will display 46 ℉ heating.

3. Child lock function

Press "▲" and " ▼" simultaneously to turn on or turn off child lock function. When child lock function is on, " 🔒 " icon is displayed on remote controller. If you operate the remote controller, the " 🔒 " icon will blink three times without sending signal to the unit.

4. Temperature display switchover function

Under OFF status, press " ▼" and "MODE" buttons simultaneously to switch temperature display between ℃ and ℉ .

5. I FELL Function

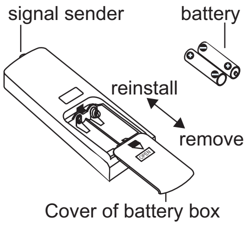
Press "▲" and "MODE" buttons simultaneously to start I FEEL function and "🧍" will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unitwill automatically adjust the indoor temperature according to the detected tempera-ture. Press this two buttons simultaneously again to close I FEEL function and " 🧍 " will disappear.

- Please put the remote controller near user when this function is set. Do not put the remote controller near the object of high temperature or low temperature in order to avoid detecting inaccurate ambient temperature.When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.

If “H1” is displayed on the remote controller while it’s not operated by the professional person/after-sales person, it belongs to the misoperation.
Please operate it as below to cancel it.Under the OFF status of remote controller, hold the MODE button for 5s to cancel “H1” display.
Note:
- If remote controller displays “H1”, it belongs to the normal function reminder. If the unit is defrosting under heating mode, it operates according to H1 defrosting mode. “H1” won’t be displayed on the panel of indoor unit;
- Once you set H1 mode, if you turn off unit by remote controller, H1 will display 3 times on the remote controller and then disappear;
- Also, when you set H1 mode, when you change to heating mode, H1 will display 3 times on the remote controller and then disappear.

Replacement of batteries in remote controller

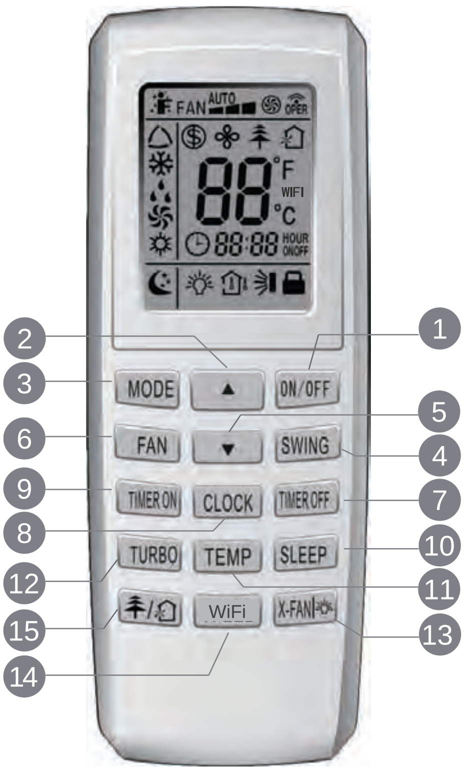
1. Press the back side of remote controller marked with " OPEN ", as shown in the fig, and then push out the cover of battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.
3. Reinstall the cover of battery box.



Note:

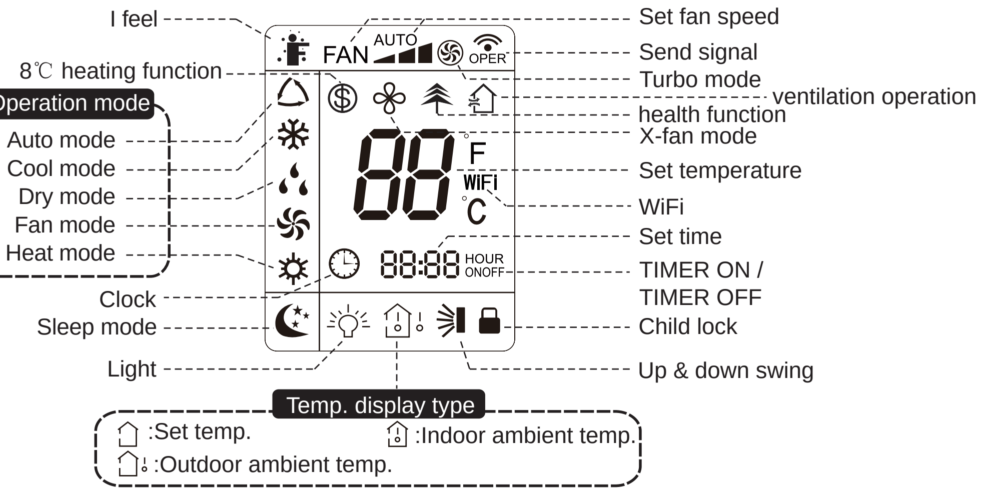
- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you dont use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or theres no display, please replace batteries.

6.2 Remote Controller Introduction of YV1FB9F(WiFi)


FAN
AUTO
OPER
88
°F
WIFI
°C
88:88
HOUR
ONOFF
MODE
▲
ON/OFF
FAN
▼
SWING
TIMER ON
CLOCK
TIMER OFF
TURBO
TEMP
SLEEP
WiFi
X-FAN
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

① ON/OFF button
② ▲ button
③ MODE button
④ SWING button
⑤ ▼ button
⑥ FAN button
⑦ TIMER OFF button
⑧ CLOCK button
⑨ TIMER ON button
⑩ SLEEP button
⑪ TEMP button
⑫ TURBO button
⑬ X-FAN | ☼ button
⑭ WiFi button
⑮ ⇞/⌂ button

Introduction for icons on display screen


I feel
8℃ heating function
Operation mode
Auto mode
Cool mode
Dry mode
Fan mode
Heat mode
Clock
Sleep mode
Light
FAN
AUTO
OPER
88
°F
WiFi
°C
88:88
HOUR
ONOFF
Set fan speed
Send signal
Turbo mode
ventilation operation
health function
X-fan mode
Set temperature
WiFi
Set time
TIMER ON /
TIMER OFF
Child lock
Up & down swing
Temp. display type
:Set temp.
:Indoor ambient temp.
:Outdoor ambient temp.

Introduction for buttons on remote controller

Note:

- This is a general use remote controller, it could be used for the air conditioners with multifunction;For some function, which the model doesn't have,if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Operation indicator "⏻" is ON (red indicator, the colour different for different models).After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶"on the display of remote controller will blink once and the air conditioner will give out a “de” sound, which means the signal has been sent to the air conditioner.
- Under off status, set temperature and clock icon will be displayed on the display of remote controller (If timer on, timer off and light functions are set, the corre-sponding icons will be displayed on the display of remote controller at the same time); Under on status, the display will show the corresponding set function icons.

1. ON/OFF button

Press this button to turn on the unit. Press this button again to turn off the unit.

2. ▲ button

Press this button to increase set temperature. Holding it down above 2 seconds rapidly increases set temperature. In AUTO mode, set temperature is not adjustable.

3. MODE button

Each time you press this button,a mode is selected in a sequence that goes from AUTO, COOL, DRY, FAN, and HEAT *, as the following:

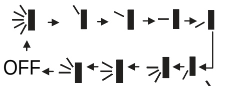
AUTO ▶ COOL ▶ DRY ▶ FAN ▶HEAT*

* Note: Only for models with heating function.

After energization, AUTO mode is defaulted. In AUTO mode, the set temperature will not be displayed on the LCD, and the unit will automatically select the suitable operation mode in accordance with the room temperature to make indoor room comfortable.

4. SWING button

Press this button to set up & down swing angle, which circularly changes as below:



This remote controller is universal . If any command , or is sent out,the unit will carry out the command as

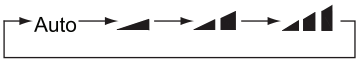
indicates the guide louver swings as:

5. ▼button

Press this button to decrease set temperature. Holding it down above 2 seconds rapidly decreases set temperature. In AUTO mode, set temperature is not adjustable.

6. FAN button

This button is used for setting Fan Speed in the sequence that goes from AUTO, ◢,◢◢,to◢◢◢ , then back to Auto.



◢Low speed ◢◢Medium speed ◢◢◢High speed

7. TIMER OFF button

Press this button to initiate the auto-off timer. To cancel the auto-timer program, simply press the button again.TIMER OFF setting is the same as TIMER ON.

8. CLOCK button

Press CLOCK button, 🕒 blinking. Within 5 seconds, pressing ▲ or▼ button adjusts the present time. Holding down either button above 2 seconds increases or decreases the time by 1 minute every 0.5 second and then by 10 minutes every 0.5 second. During blinking after setting, press CLOCK button again to confirm the setting, and then 🕒 will be constantly displayed.

9. TIMER ON button

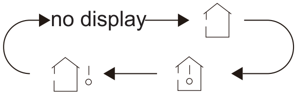
Press this button to initiate the auto-ON timer. To cancel the auto-timer program, simply press this button again.After press of this button, 🕒 disappears and "ON "blinks. 0 0:00 is displayed for ON timesetting. Within 5 seconds, press ▲ or ▼ button to adjust the time value. Every press of either button changes the time setting by 1 minute. Holding down either button rapidly changes the time setting by 1 minute and then 10 minutes. Within 5 Seconds after setting, press TIMER ON button to confirm.

10. SLEEP button

Press this button to go into the SLEEP operation mode. Press it again to cancel this function. This function is available in COOL, HEAT (Only for models with heating function) to maintain the most comfortable temperature for you.

11. TEMP button

Press this button, you can see indoor set temperature, indoor ambient temperature on indoor unit's display. The setting on remote controller is selected circularly as below:



When selecting "⌂" with remote controller or no display, temperature indicator on indoor unit displays set temperature; When selecting "⌂" with remote controller, temperatureindicator on indoor unit displays indoor ambient temperature; 3s later or within 3s itreceives other remote controller signal that will return to display the setting temperature.

Caution:

- This model hasn't outdoor ambient temperature display function. While remote controllercan operate "⌂" and indoor unit displays set temperature.
- It's defaulted to display set temperature when turning on the unit.
- Only for the models with temperature indicator on indoor unit.

12. TURBO button

Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in the shortest time. In COOL mode, the unit will blow strong cooling air at super high fan speed. In HEAT mode, the unit will blow strong heating air at super high fan speed.

13. X-FAN |☼ button

X-FAN function: In COOL or DRY mode, the icon✤is displayed and the indoor fan willcontinue operation for 2 minutes in order to dry the indoor unit even though you haveturned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

☼function: turn on the display's light and press this button again to turn off the display's light. If the light is turned on,☼ is displayed. If the light is turned off,☼disappears.

14. WiFi button

Press " WiFi " button to turn on or turn off WiFi function. When WiFi function is turned on, the " WiFi " icon will be displayed on remote controller; Under status of unit off, press "MODE" and " WiFi " buttons simultaneously for 1s, WiFi module will restore to factory default setting.

- This function is only available for some models.

15. 🌲/⌂ button

Press this button to achieve the on and off of healthy and scavenging functions inoperation status. Press this button for the first time to start scavenging function; LCD displays "⌂". Press the button for the second time to start healthy and scavenging functions simultaneously; LCD displays "⌂" and "🌲". Press this button for the third time to quit healthy and scavenging functions simultaneously. Press the button for the fourth time to start healthy function; LCD display "🌲". Press this button again to repeat the operation above. (This function is applicable to partial of models)

Function introduction for combination buttons

Combination of "▲" and " ▼" buttons: About lock

Press "▲" and "▼" buttons simultaneously to lock or unlock the keypad. If the remote controller is locked, 🔒 is displayed. In this case, pressing any button, 🔒blinks three times.

Combination of "MODE" and "▼" buttons:

About switch between Fahrenheit and centigrade

At unit OFF, press "MODE" and "▼" buttons simultaneously to switch between ℃ and ℉ .

Combination of "TEMP" and "CLOCK" buttons:

About Energy-saving Function

Press "TEMP" and "CLOCK" simultaneously in COOL mode to start energy-saving function.Nixie tube on the remote controller displays "SE". Repeat the operation to quit the function.

Combination of "TEMP" and "CLOCK" buttons:

About 8℃ Heating Function

Press "TEMP" and "CLOCK" simultaneously in HEAT mode to start 8℃ Heating Function Nixie tube on the remote controller displays "Ⓢ" and a selected temperature of "8℃ ".(46 ℉ if Fahrenheit is adopted). Repeat the operation to quit the function.

I FEEL Function

Press "▲" and "MODE" buttons simultaneously to start I FEEL function and "🧍" will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature.

Press this two buttons simultaneously again to close I FEEL function and "🧍" will disappear.

- Please put the remote controller near user when this function is set. Do not put the remote controller near the object of high temperature or low temperature in order to avoid detecting inaccurate ambient temperature. When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.

"If “H1” is displayed on the remote controller while it’s not operated by the professional person/after-sales person, it belongs to the misoperation.

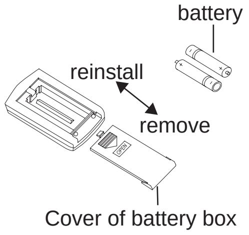
Please operate it as below to cancel it.Under the OFF status of remote controller, hold the “MODE” button and “X-FAN” buttons simultaneously for 5s to cancel “H1” display.

Note:

- If remote controller displays “H1”, it belongs to the normal function reminder. If the unit is defrosting under heating mode, it operates according to H1 defrosting mode. “H1” won’t be displayed on the panel of indoor unit;
- Once you set H1 mode, if you turn off unit by remote controller, H1 will display 3 times on the remote controller and then disappear;
- Also, when you set H1 mode, when you change to heating mode, H1 will display 3 times on the remote controller and then disappear."

Replacement of batteries in remote controller

1. Press the back side of remote controller marked with"OPEN", as show in the fig, and then push out the cover of battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "▲" polar and "▼" polar are correct.
3. Reinstall the cover of battery box.

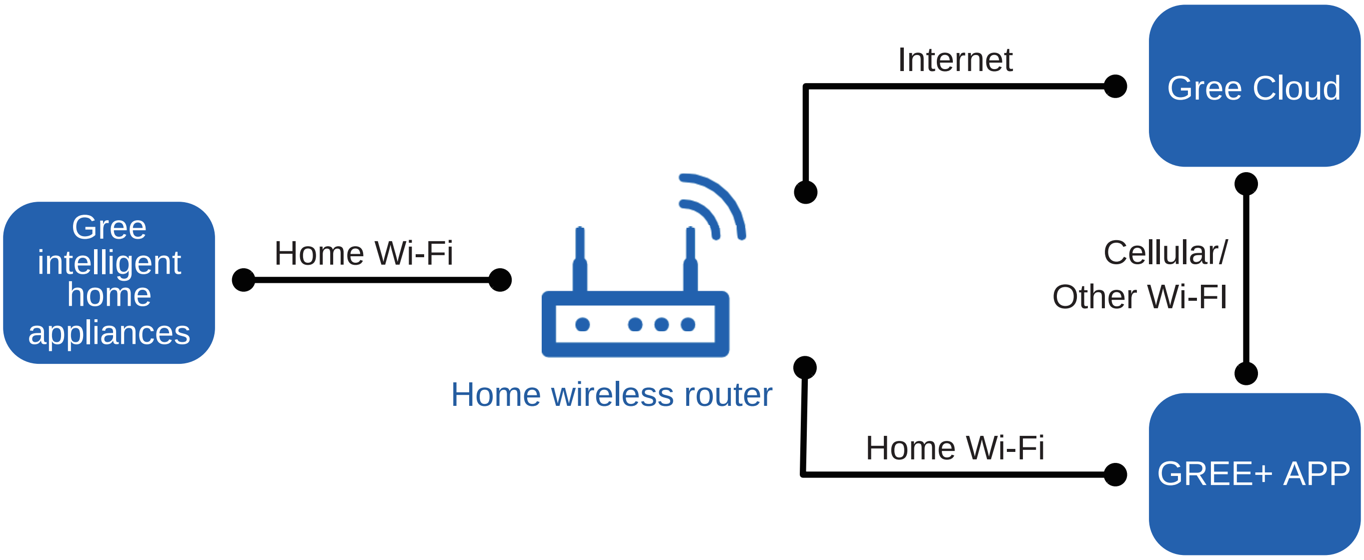


Note:

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don’t use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there’s no display, please replace batteries.

6.3 GREE+ App Operation Manual

Control Flow Chart


Internet
Gree Cloud
Gree intelligent home appliances
Home Wi-Fi
Cellular/ Other Wi-FI
Home wireless router
Home Wi-Fi
GREE+ APP

Operating Systems

Requirement for User's smart phone:

iOS system
Support iOS7.0 and above version

Android system
Support Android 4.4 and above version

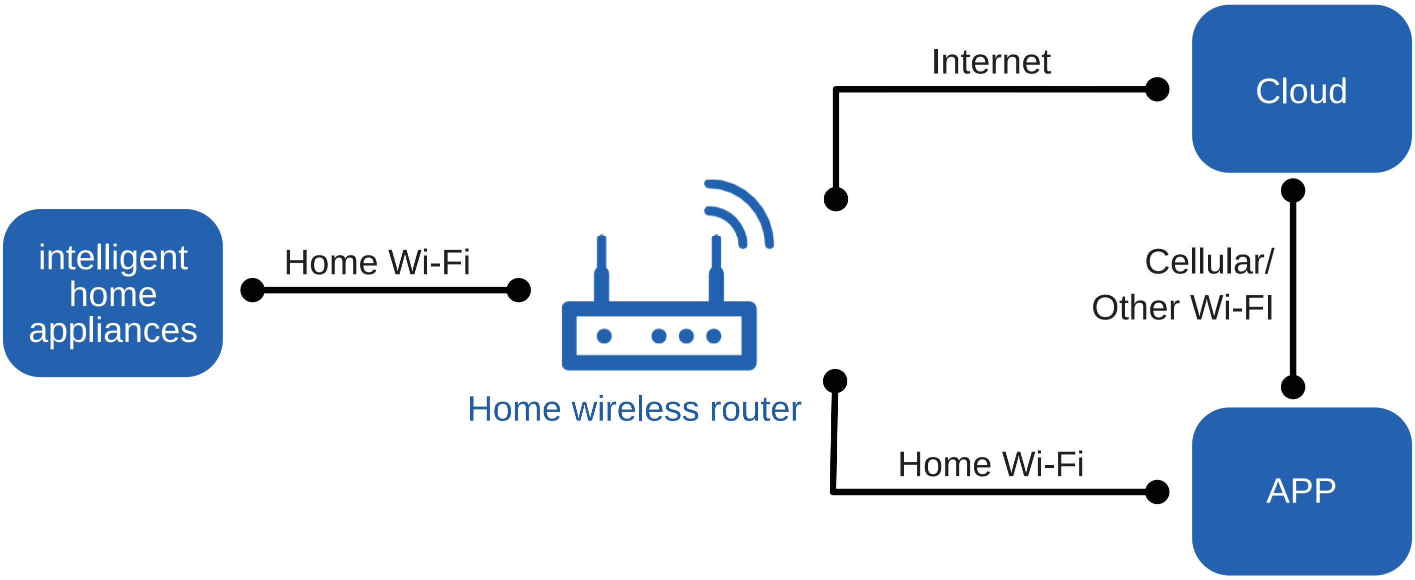
Download and installation

GREE+ App Download Linkage

Scan the QR code or search "GREE+" in the application market to download and install it. When "GREE+" App is installed, register the account and add the device to achieve long-distance control and LAN control of Gree smart home appliances.
For more information, please refer to "Help" in App.

6.4 Ewpe Smart App Operation Manual

Control Flow Chart


intelligent home appliances
Home Wi-Fi
Home wireless router
Internet
Cloud
Cellular/ Other Wi-FI
Home Wi-Fi
APP

Operating Systems

Requirement for User's smart phone:

iOS system
Support iOS7.0 and above version

Android system
Support Android 4.4 and above version

Download and installation

App Download Linkage

Scan the QR code or search "Ewpe Smart" in the application market to download and install it. When "Ewpe Smart" App is installed, register the account and add the device to achieve long-distance control and LAN control of smart home appliances.
For more information, please refer to "Help" in App.

6.5 Brief Description of Modes and Functions

1. Temperature Parameters

Indoor preset temperature(Tpreset)

Indoor ambient temperature (Tamb.)

2. Basic Functions

Once energized, in no case should the compressor be restarted within less than 3 minutes. In the situation that memory functionis available, for the first energization, if the compressor is at stop before de-energization, the compressor will be started withouta 3-minute lag; if the compressor is in operation before de-energization, the compressor will be started with a 3-minute lag; andonce started, the compressor will not be stopped within 6 minutes regardless of changes in room temperature;

(1) Cooling Mode

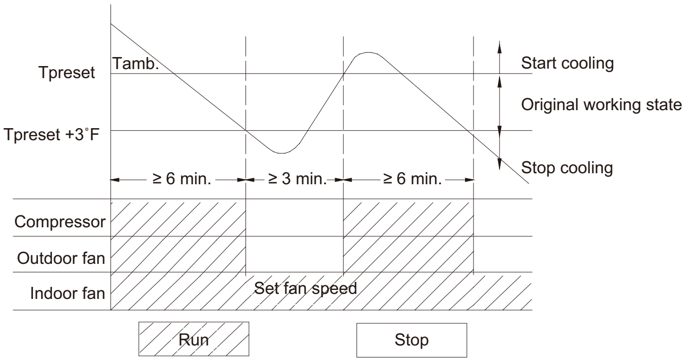
① Working conditions and process of cooling

When Tamb. ≥ Tpreset, the unit will enter cooling operation, in which case the indoor fan, the outdoor fan and the compressor willwork and the indoor fan will run at preset speed.

When Tamb.≤Tpreset+28.4°F, the compressor will stop, the outdoor fan will stop with a time lag of 60s, and the indoor fan will run atpreset speed.

When Tpreset+28.4°F < Tamb.< Tpreset, the unit will remain at its previous state.

Under this mode, the four-way valve will be de-energized and temperature can be set within a range from 61°F~86°F. If the compressor is shut down for some reason, the indoor fan and the swing device will operate at original state.



② Protection

Antifreeze protection

Under cooling and dehumidifying mode, 6 minutes after the compressor is started:

If Tevap ≤ 35.6°F, the compressor will operate at reduced frequency.

If Tevap ≤ 30.2°F is detected for durative 3 minutes, the compressor will stop, and after 60 seconds, the outdoor fan will stop;and under cooling mode, the indoor fan and the swing motor will remain at the original state.

If Tevap. ≥ 42.8°F and the compressor has remained at OFF for at least 3 minutes, the compressor will resume its original operation state.

Total current up and frequency down protection

If I_{total} ≤ 16A, frequency rise will be allowed; if I_{total} ≥ 17A, frequency rise will not be allowed; if I_{total} ≥ 18A, the compressor will run at reduced frequency; and if I_{total} ≥ 20A, the compressor will stop and the outdoor fan will stop with a time lag of 60s.

(2) Dehumidifying Mode

① Working conditions and process of dehumidifying

If Tamb. > Tpreset, the unit will enter cooling and dehumidifying mode, in which case the compressor and the outdoor fan will operate and the indoor fan will run at low speed.

If Tpreset+28.4°F ≤ Tamb. ≤ Tpreset the compressor remains at its original operation state.

If Tamb.< Tpreset , the compressor will stop, the outdoor fan will stop with a time lag of 60s, and the indoor fan will operate at low speed.

② Protection

Protection is the same as that under the cooling mode.

(3) Heating Mode

① Working conditions and process of heating

If Tamb. ≤ Tpreset+35.6°F($T_{indoor\ ambient} \le T_{setting} + 2$ ℃ , start with heating mode), the unit enters heating mode, in which case the four-way valve, the compressor and the outdoor fan will operate simultaneously, and the indoor fan will run at preset speed in the condition of preset cold air prevention.

If Tamb. ≥ Tpreset+37.4°F($T_{indoor\ ambient} \ge T_{setting}+3$℃ , it stops when reaches temperature point), the compressor will stop, the outdoor fan will stop with a time lag of 60s, and the indoor fan will stop after 60-second blow at low speed.

If Tpreset < Tamb.<Tpreset+37.4°F($T_{setting} < T_{indoor\ ambient} < T_{setting}+3$℃ , maintain heating mode), the unit will maintain its original operating status.

Under this mode, the four-way valve is energized and temperature can be set within a range of 61°F~86°F. The operatingsymbol, the heating symbol and preset temperature are revealed on the display.

② Condition and process of defrost

When duration of successive heating operation is more than 45 minutes, or accumulated heating time more than 90 minutes, andone of the following conditions is reached, the unit will enter the defrost mode after 3 minutes.
a. Toutdoor amb. ≥ 41°F, Toutdoor pipe ≤ 28.4°F;
b. 28.4°F ≤ Toutdoor amb. ≤ 41°F,Toutdoor pipe - Tcompensation≤ 23°F
c. 23°F < Toutdoor amb. ≤ 28.4°F, Toutdoor pipe - Tcompensation≤ 17.6°F;
d. 14°F < Toutdoor amb. < 23°F, Toutdoor pipe- Tcompensation ≤ Toutdoor amb.+26.6°F;
e. Toutdoor amb. < 14°F, Toutdoor pipe- Tcompensation ≤ Toutdoor amb.+26.6°F;
After energization, when defrosting for the first time Tcompensation=0°F. If it is not the firstly time for defrosting, the Tcompensation is determined by the Toutdoor pipe of last time quitting defrosting.
a.Toutdoor pipe > 35.6°F, Tcompensation=32°F; b. Toutdoor pipe ≤ 35.6°F, Tcompensation=33.8°F.
At that time, the indoor fan stops and the compressor stops, and after 60 seconds the outer fan will stop, and then after 30seconds, the four-way valve will stop. After 30 seconds, the compressor is initiated for raising the frequency to defrost frequency.
When the compressor has operated under defrost mode for 10 minutes, or Touter tube ≥ 50°F, the compressor will be converted to 46Hz operation.After 30 seconds, the compressor will stop. And after another 30 seconds, the four-way valve will be opened, and after60 seconds, the compressor and the outer fan will be started, the indoor fan will run under preset cold air prevention conditions,and H1 will be displayed at temperature display area on the display panel. Defrost frequency is 70 Hz.

3.Protection

Cold air prevention
The unit is started under heating mode (the compressor is ON):
① In the case of Tindoor amb. < 75°F: if T tube ≤ 104°F and the indoor fan is at stop state, the indoor fan will begin to run at low speed witha time lag of 2 minutes. Within 2 minutes, if T tube > 104°F, the indoor fan also will run at low speed; and after 1 minute operation atlow speed, the indoor fan will be converted to operation at preset speed. Within 1 minute low speed operation or 2 minute non-operation, if T tube > 108°F, the fan will run at present speed.
② In the case of Tindoor amb. < 75°F: if Ttube ≤ 108°F, the indoor fan will run at low speed, and after one minute, the indoor fan will beconverted to preset speed. Within 1 minute low speed operation, if Ttube > 104°F, the indoor fan will be converted to preset speed.Note: Tindoor amb. indicated in ① and ② refers to, under initially heating mode, the indoor ambient temperature before the command to start the compressor is performed according to the program, or after the unit is withdrawn from defrost, the indoor ambient temperature before the defrost symbol is cleared.
Total current up and frequency down protection
If the total current I_{total} ≤ 16A, frequency rise will be allowed; if I_{total} ≥ 17A,frequency rise will not be allowed; if Itotal18A,the compressorwill run at reduced frequency; and if Itotal20A, the compressor will stop and the outdoor fan will stop with a time lag of 60s.
(4) Fan Mode
Under the mode, the indoor fan will run at preset speed and the compressor, the outdoor fan, the four-way valve and the electricheater will stop.
Under the mode, temperature can be set within a range of 61°F~86°F.
(5) AUTO Mode
① Working conditions and process of AUTO mode
Under AUTO mode, standard cooling temperature Tpreset is 77°F and standard heating temperature Tpreset is 68°F.
a. Once energized, if Tamb. ≤ 71.6°F, the unit will be started under heating mode; if 71.6°F < Tamb.< 78.8°F, the unit will run under fanmode and the run indicator will be bright; and if Tamb. ≥ 78.8°F, the unit will be started under cooling mode.
b.Under AUTO mode,if Tamb. ≥ Tpreset +1.8ºF is detected,the unit will select to run under cooling mode,in which case implicit presettemperature is 77°F; if Tamb. ≤ Tpreset-1.8°F, the compressor will stop, the outdoor fan will stop with a time lag of 1 minute, andtheindoor fan will run at preset speed; and if Tpreset-1.8°F < Tamb. < Tpreset+1.8ºF, the unit will remain at its original state.
c.Under AUTO mode, if Tamb. ≤ Tpreset+3.6°F is detected, the unit will select to run under heating mode, in which case implicit preset temperature is 64°F; if Tamb. ≥ Tpreset+9°F, the compressor will stop, the outdoor fan will stop with a time lag of 1 minute,and the indoor fan will run under the mode of residue heat blowing; and if Tpreset+3.6°F < Tamb.< Tpreset+41°F, the unit will remainatits original state. The cooling-only unit will run under fan mode.
d.Under AUTO mode, if 71.6°F < Tamb.< 78.8°F, the unit will remain at its original state.
② Protection
a. In cooling operation, protection is the same as that under the cooling mode;
b. In heating operation, protection is the same as that under the heating mode;
c. When ambient temperature changes, operation mode will be converted preferentially. Once started, the compressor willremain unchanged for at least 6 minutes.
(6) Common Protection Functions and Fault Display under COOL, HEAT, DRY and AUTO Modes
① Overload protection
Ttube:measured temperature of outdoor heat exchanger under cooling mode; and measured temperature of indoor heat ex-changer under heating mode.
1) Cooling overloada.
a. If Ttube ≤ 126°F, the unit will return to its original operation state.
b. If Ttube ≥ 131°F, frequency rise is not allowed.

c. If Ttube ≥ 136°F, the compressor will run at reduced frequency.

d. If Ttube ≥ 144°F, the compressor will stop and the indoor fan will run at preset speed.

2) Heating overload

a. If Ttube ≤ 126°F, the unit will return to its original operation state.

b. If Ttube ≥ 131°F, frequency rise is not allowed.

c. If Ttube ≥ 136°F, the compressor will run at reduced frequency.

d. If Ttube ≥ 144°F,the compressor will stop and the indoor fan will blow residue heat and then stop.

② Exhaust temperature protection of compressor

If exhaust temperature ≥ 208°F, frequency is not allowed to rise.

If exhaust temperature ≥ 217°F, the compressor will run at reduced frequency.

If exhaust temperature ≥ 230°F, the compressor will stop.

If exhaust temperature ≤ 194°F, the compressor has stayed at stop for at least 3 minutes, the compressor will resume itsoperation.

③ Communication fault

If the unit fails to receive correct signals for durative 3 minutes, communication fault can be justified and the whole system will stop.

④ Module protection

Under module protection mode, the compressor will stop. When the compressor remains at stop for at least 3 minutes, thecompressor will resume its operation. If module protection occurs six times in succession, the compressor will not be startedagain.

⑤ Overload protection

If temperature sensed by the overload sensor is over 239°F, the compressor will stop and the outdoor fan will stop with atime lag of 30 seconds. If temperature is below 203°F, the overload protection will be relieved.

If voltage on the DC bus is below 150V or over 420V, the compressor will stop and the outdoor fan will stop with a timelag of 30 seconds. When voltage on the DC bus returns to its normal value and the compressor has stayed at stop for at least3 minutes, the compressor will resume its operation.

⑥ Faults of temperature sensors

Designation of sensors	Faults
Indoor ambient temperature	The sensor is detected to be open-circuited or short-circuited for successive 5 seconds
Indoor tube temperature	The sensor is detected to be open-circuited or short-circuited for successive 5 seconds
Outdoor ambient temperature	The sensor is detected to be open-circuited or short-circuited for successive 30 seconds
Outdoor tube temperature	The sensor is detected to be open-circuited or short-circuited forsuccessive 30 seconds, and no detection is performed within 10 minutesafter defrost begins.
Exhaust	After the compressor has operated for 3 minutes, the sensor is detectedto be open-circuited or short-circuited for successive 30 seconds.
Overload	After the compressor has operated for 3 minutes, the sensor is detectedto be open-circuited or short-circuited for successive 30 seconds.

Part Ⅱ : Installation and Maintenance

7. Notes for Installation and Maintenance

Safety Precautions:

Important!

Please read the safety precautions carefully before installation and maintenance.
The following contents are very important for installation and maintenance.

Please follow the instructions below.

- The installation or maintenance must accord with the instructions.
- Comply with all national electrical codes and local electrical codes.
- Pay attention to the warnings and cautions in this manual.
- All installation and maintenance shall be performed by distributor or qualified person.
- All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.
- Be caution during installation and maintenance. Prohibit incorrect operation to prevent electric shock, casualty and other accidents.

Warnings

Electrical Safety Precautions:

1. Cut off the power supply of air conditioner before checking and maintenance.
2. The air condition must apply specialized circuit and prohibit share the same circuit with other appliances.
3. The air conditioner should be installed in suitable location and ensure the power plug is touchable.
4. Make sure each wiring terminal is connected firmly during installation and maintenance.
5. Have the unit adequately grounded. The grounding wire cant be used for other purposes.
6. Must apply protective accessories such as protective boards, cable-cross loop and wire clip.
7. The live wire, neutral wire and grounding wire of power supply must be corresponding to the live wire, neutral wire and grounding wire of the air conditioner.
8. The power cord and power connection wires cant be pressed by hard objects.
9. If power cord or connection wire is broken, it must be replaced by a qualified person.
10. If the power cord or connection wire is not long enough, please get the specialized power cord or connection wire from the manufacture or distributor. Prohibit prolong the wire by yourself.
11. For the air conditioner without plug, an air switch must be installed in the circuit. The air switch should be all-pole parting and the contact parting distance should be more than 1/8 inch.
12. Make sure all wires and pipes are connected properly and the valves are opened before energizing.
13. Check if there is electric leakage on the unit body. If yes, please eliminate the electric leakage.
14. Replace the fuse with a new one of the same specification if it is burnt down; dont replace it with a cooper wire or conducting wire.
15. If the unit is to be installed in a humid place, the circuit breaker must be installed.

Installation Safety Precautions:

1. Select the installation location according to the requirement of this manual.(See the requirements in installation part)
2. Handle unit transportation with care; the unit should not be carried by only one person if it is more than 44.09lb.
3. When installing the indoor unit and outdoor unit, a sufficient fixing bolt must be installed; make sure the installation support is firm.
4. Ware safety belt if the height of working is above 78 3/4 inch.
5. Use equipped components or appointed components during installation.
6. Make sure no foreign objects are left in the unit after finishing installation.

Refrigerant Safety Precautions:

When refrigerant leaks or requires discharge during installation, maintenance, or disassembly, it should be handled by certified professionals or otherwise in compliance with local laws and regulations.

1. Avoid contact between refrigerant and fire as it generates poisonous gas; Prohibit prolong the connection pipe by welding.
2. Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture or other hazards.
3. Make sure no refrigerant gas is leaking out when installation is completed.
4. If there is refrigerant leakage, please take sufficient measure to minimize the density of refrigerant.
5. Never touch the refrigerant piping or compressor without wearing glove to avoid scald or frostbite.

Improper installation may lead to fire hazard, explosion, electric shock or injury.

Safety Precautions for Installing and Relocating the Unit

To ensure safety, please be mindful of the following precautions.

Warnings

1. When installing or relocating the unit, be sure to keep the refrigerant circuit free from air or substances other than the specified refrigerant.
Any presence of air or other foreign substance in the refrigerant circuit will cause system pressure rise or compressor rupture, resulting in injury.

2.When installing or moving this unit, do not charge the refrigerant which is not comply with that on the nameplate or unqualified refrigerant.
Otherwise, it may cause abnormal operation, wrong action, mechanical malfunction or even series safety accident.

3.When refrigerant needs to be recovered during relocating or repairing the unit, be sure that the unit is running in cooling mode.Then, fully close the valve at high pressure side (liquid valve).About 30-40 seconds later, fully close the valve at low pressure side (gas valve), immediately stop the unit and disconnect power. Please note that the time for refrigerant recovery should not exceed 1 minute.
If refrigerant recovery takes too much time, air may be sucked in and cause pressure rise or compressor rupture, resulting in injury.

4.During refrigerant recovery, make sure that liquid valve and gas valve are fully closed and power is disconnected before detaching the connection pipe.
If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

5.When installing the unit, make sure that connection pipe is securely connected before the compressor starts running.
If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

6.Prohibit installing the unit at the place where there may be leaked corrosive gas or flammable gas.
If there leaked gas around the unit, it may cause explosion and other accidents.

7.Do not use extension cords for electrical connections. If the electric wire is not long enough, please contact a local service center authorized and ask for a proper electric wire.
Poor connections may lead to electric shock or fire.

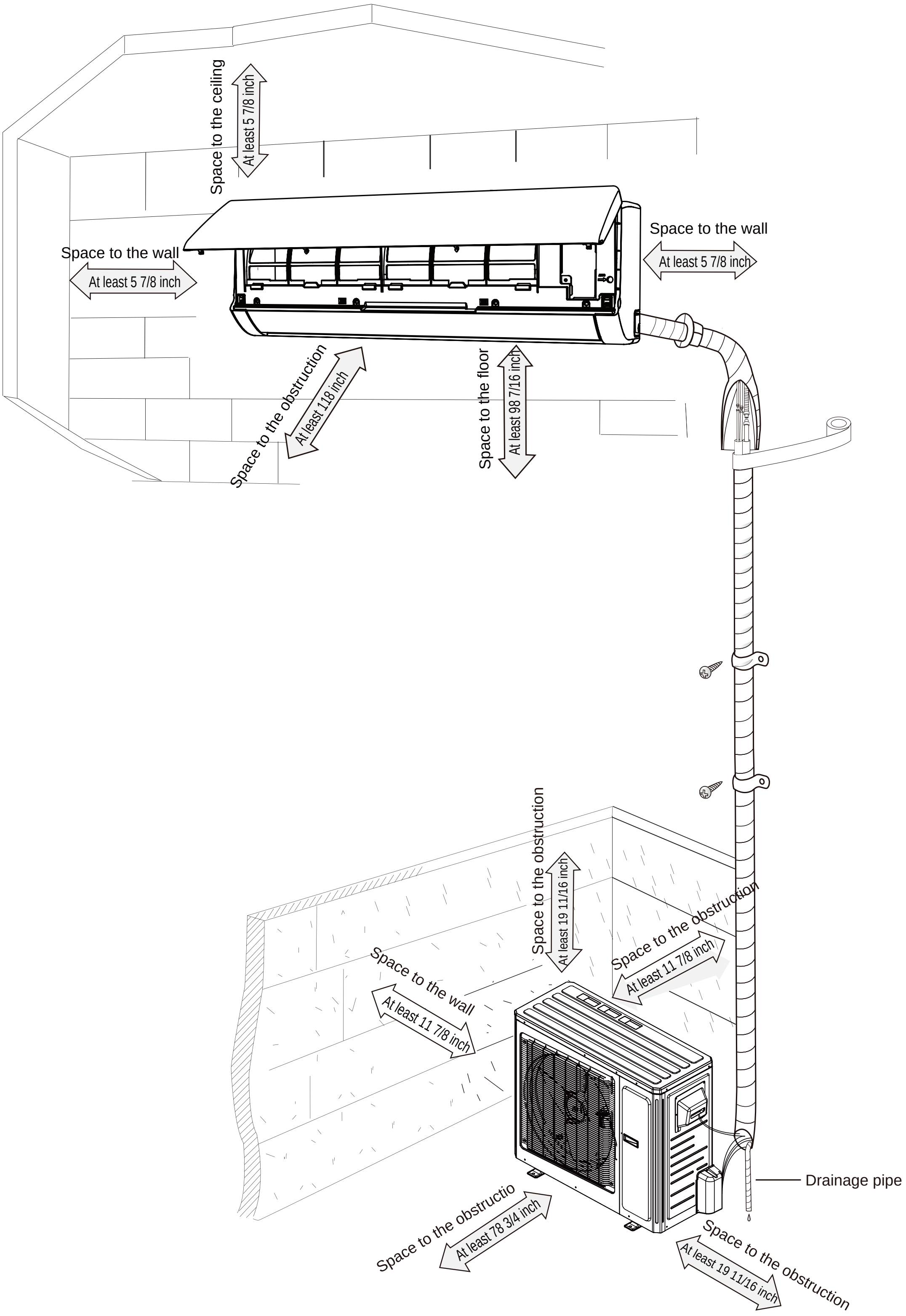
8.Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the wires so that their terminals receive no external stresses.
Electric wires with insufficient capacity, wrong wire connections and insecure wire terminals may cause electric shock or fire.

Main Tools for Installation and Maintenance

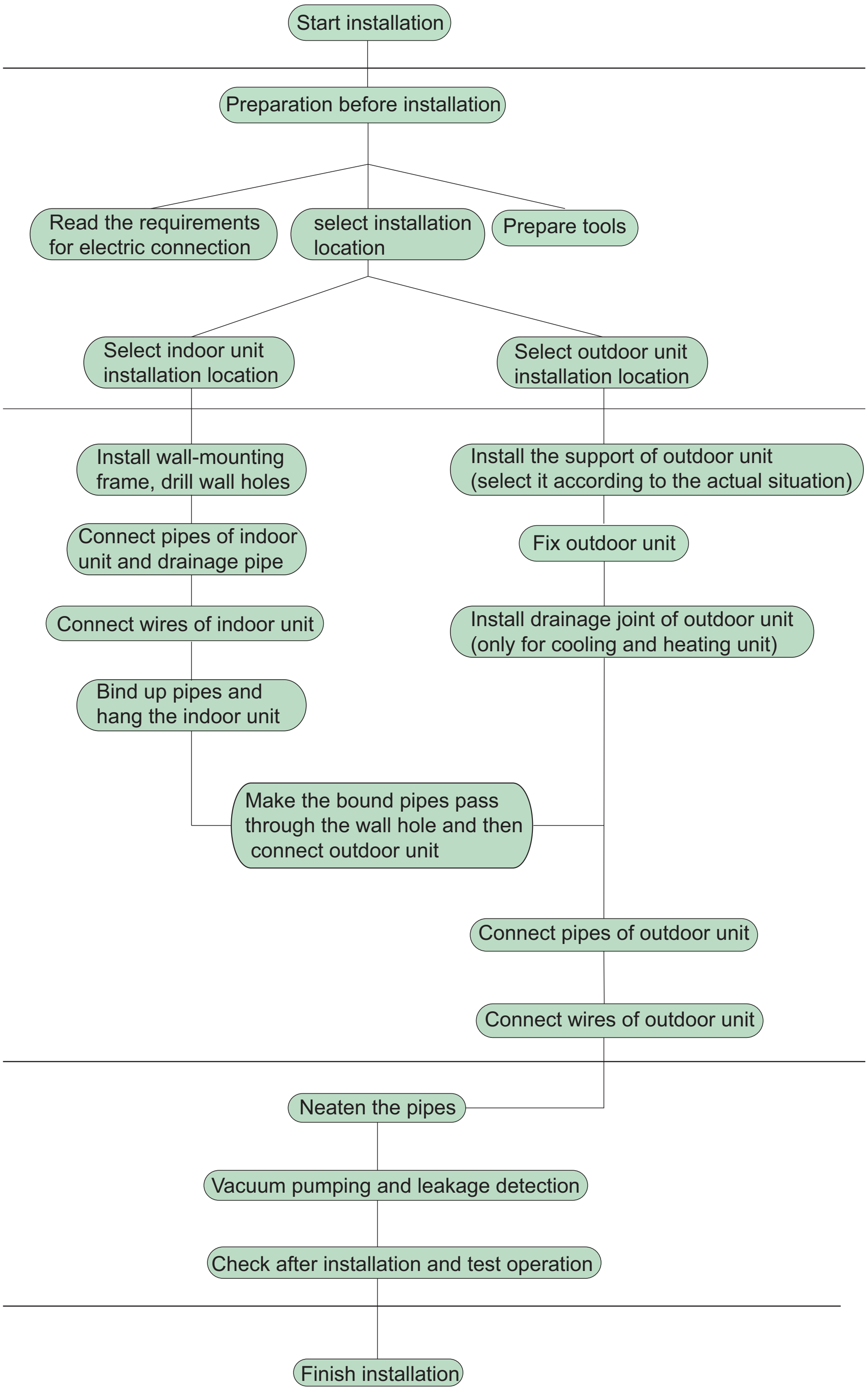
1. Level meter, measuring tape 	**2. Screw driver** 	**3. Impact drill, drill head, electric drill**
4. Electroprobe 	**5. Universal meter** 	**6. Torque wrench, open-end wrench, inner hexagon spanner**
7. Electronic leakage detector 	**8. Vacuum pump** 	**9. Pressure meter**
10. Pipe pliers, pipe cutter 	**11. Pipe expander, pipe bender** 	**12. Soldering appliance, refrigerant container electronic scale**

8. Installation

8.1 Installation Dimension Diagram


Space to the ceiling
At least 5 7/8 inch
Space to the wall
At least 5 7/8 inch
Space to the wall
At least 5 7/8 inch
Space to the obstruction
At least 118 inch
Space to the floor
At least 98 7/16 inch
Space to the obstruction
At least 19 11/16 inch
Space to the obstruction
At least 11 7/8 inch
Space to the wall
At least 11 7/8 inch
Drainage pipe
Space to the obstructio
At least 78 3/4 inch
Space to the obstruction
At least 19 11/16 inch

Installation procedures


Start installation
Preparation before installation
Read the requirements for electric connection
select installation location
Prepare tools
Select indoor unit installation location
Select outdoor unit installation location
Install wall-mounting frame, drill wall holes
Install the support of outdoor unit (select it according to the actual situation)
Connect pipes of indoor unit and drainage pipe
Fix outdoor unit
Connect wires of indoor unit
Install drainage joint of outdoor unit (only for cooling and heating unit)
Bind up pipes and hang the indoor unit
Make the bound pipes pass through the wall hole and then connect outdoor unit
Connect pipes of outdoor unit
Connect wires of outdoor unit
Neaten the pipes
Vacuum pumping and leakage detection
Check after installation and test operation
Finish installation

Note: this flow is only for reference; please find the more detailed installation steps in this section.

8.2 Installation Parts-checking

No.	Name	No.	Name
1	Indoor unit	8	Sealing gum
2	Outdoor unit	9	Wrapping tape
3	Connection pipe	10	Support of outdoor unit
4	Drainage pipe	11	Fixing screw
5	Wall-mounting frame	12	Drainage plug(cooling and heating unit)
6	Connecting cable(power cord)	13	Owners manual, remote controller
7	Wall pipe		

⚠ **Note:**

1.Please contact the local agent for installation.

2.Dont use unqualified power cord.

8.3 Selection of Installation Location

1. Basic Requirement:

Installing the unit in the following places may cause malfunction. If it is unavoidable, please consult the local dealer:

(1) The place with strong heat sources, vapors, flammable or explosive gas, or volatile objects spread in the air.

(2) The place with high-frequency devices (such as welding machine, medical equipment).

(3) The place near coast area.

(4) The place with oil or fumes in the air.

(5) The place with sulfureted gas.

(6) Other places with special circumstances.

(7) Do not use the unit in the immediate surroundings of a laundry a bath a shower or a swimming pool.

2. Indoor Unit:

(1) There should be no obstruction near air inlet and air outlet.

(2) Select a location where the condensation water can be dispersed easily and wont affect other people.

(3) Select a location which is convenient to connect the outdoor unit and near the power socket.

(4) Select a location which is out of reach for children.

(5) The location should be able to withstand the weight of indoor unit and wont increase noise and vibration.

(6) The appliance must be installed 98 7/16 inch above floor.

(7) Dont install the indoor unit right above the electric appliance.

(8) The appliance shall not be installed in the laundry.

3. Outdoor Unit:

(1) Select a location where the noise and outflow air emitted by the outdoor unit will not affect neighborhood.

(2) The location should be well ventilated and dry, in which the outdoor unit wont be exposed directly to sunlight or strong wind.

(3) The location should be able to withstand the weight of outdoor unit.

(4) Make sure that the installation follows the requirement of installation dimension diagram.

(5)Select a location which is out of reach for children and far away from animals or plants.If it is unavoidable, please add fence for safety purpose.

8.4 Requirements for electric connection

1. Safety Precaution

(1) Must follow the electric safety regulations when installing the unit.

(2) According to the local safety regulations, use qualified power supply circuit and air switch.

(3) Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring may result in electric shock,fire hazard or malfunction. Please install proper power supply cables before using the air conditioner.

Air-conditioner	Air switch capacity
30K except GWH30QF-D3DNB2I	30A
GWH30QF-D3DNB2I	50A
36K except GWH36QF-D3DNB2I	40A
GWH36QF-D3DNB2I	50A

(4) Properly connect the live wire, neutral wire and grounding wire of power socket.

(5) Be sure to cut off the power supply before proceeding any work related to electricity and safety.

(6) Do not put through the power before finishing installation.

(7) If the supply cord is damaged,it must be replaced by the manufacturer,its service agent or similarly qualified persons in order to avoid a hazard.

(8) The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

(9) The appliance shall be installed in accordance with national wiring regulations.

(10)Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.

2. Grounding Requirement:

(1) The air conditioner is first class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.

(2) The yellow-green wire in air conditioner is grounding wire, which cant be used for other purposes.

(3) The grounding resistance should comply with national electric safety regulations.

(4) The appliance must be positioned so that the plug is accessible.

(5) An all-pole disconnection switch having a contact separation of at least 1/8 inch in all poles should be connected in fixed wiring.

(6) Including an air switch with suitable capacity, please note the following table. Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload. (Caution: please do not use the fuse only for protect the circuit)

8.5 Installation of Indoor Unit

1. Choosing Installation location

Recommend the installation location to the client and then confirm it with the client.

2. Install Wall-mounting Frame

(1) Hang the wall-mounting frame on the wall; adjust it in horizontal position with the level meter and then point out the screw fixing holes on the wall.

(2) Drill the screw fixing holes on the wall with impact drill (the specification of drill head should be the same as the plastic expansion particle) and then fill the plastic expansion particles

in the holes.

(3) Fix the wall-mounting frame on the wall with tapping screws and then check if the frame is firmly installed by pulling the frame. If the plastic expansion particle is loose, please drill another fixing hole nearby.

3. Install Wall-mounting Frame

(1) Choose the position of piping hole according to the direction of outlet pipe. The position of piping hole should be a little lower than the wall-mounted frame.(As show in Fig.1)

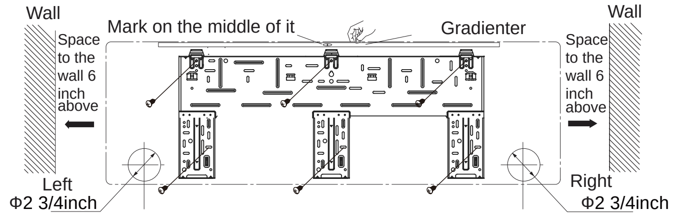

Wall
Mark on the middle of it
Gradienter
Wall
Space to the wall 6 inch above
Space to the wall 6 inch above
Left
Φ2 3/4inch
(Rear piping hole)
Right
Φ2 3/4inch
(Rear piping hole)

Fig.1

(2) Open a piping hole with the diameter of Φ2 3/4inch on the selected outlet pipe position.In order to drain smoothly, slant the piping hole on the wall slightly downward to the outdoor side with the gradient of 5-10°.(As show in Fig.2)

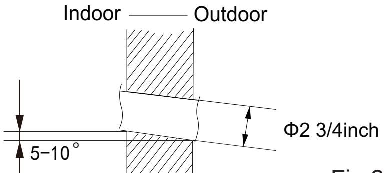

Indoor
Outdoor
Φ2 3/4inch
5-10°

Fig.2

⚠ Note:

(1) Pay attention to dust prevention and take relevant safety measures when opening the hole.

4. Outlet Pipe

(1) The pipe can be led out in the direction of right, rear right, left or rear left.(As show in Fig.3)

(2) When selecting leading out the pipe from left or right, please cut off the corresponding hole on the bottom case.(As show in Fig.4)

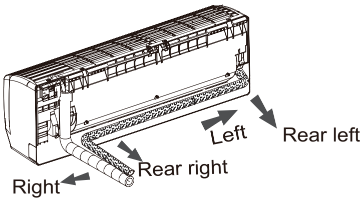

Left
Rear left
Rear right
Right

Fig.3

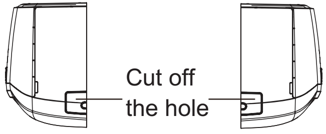

Left
Right
Cut off
the hole

Fig.4

5. Connect the Pipe of Indoor Unit

(1) Aim the pipe joint at the corresponding bellmouth.(As show in Fig.5)

(2) Pretightening the union nut with hand.

(3) Adjust the torque force by referring to the following sheet. Place the open-end wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench.(As show in Fig.6)

(4) Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape.(As show in Fig.7)

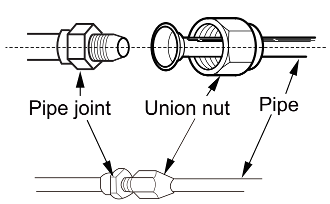

Pipe joint
Union nut
Pipe

Fig.5

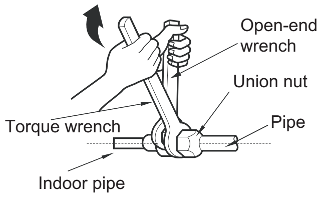

Open-end wrench
Union nut
Torque wrench
Pipe
Indoor pipe

Fig.6

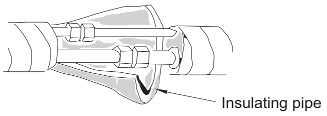

Insulating pipe

Fig.7

Refer to the following table for wrench moment of force:

Hex nut diameter(inch)	Tightening torque(ft·Ibf)
Φ1/4	11.10~14.75
Φ3/8	20.12~29.50
Φ1/2	33.19~40.56
Φ5/8	44.24~47.94
Φ3/4	51.32~55.31

6. Install Drain Hose

(1) Connect the drain hose to the outlet pipe of indoor unit.(As show in Fig.8)

(2) Bind the joint with tape.(As show in Fig.9)

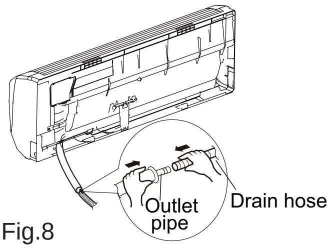

Outlet pipe
Drain hose

Fig.8

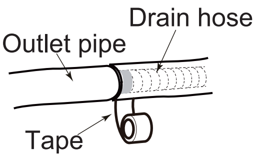

Drain hose
Outlet pipe
Tape

Fig.9

⚠ Note:

(1) Add insulating pipe in the indoor drain hose in order to prevent condensation.

(2) The plastic expansion particles are not provided.

(As show in Fig.10)

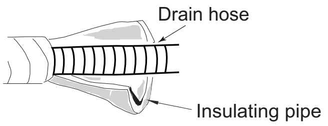

Drain hose
Insulating pipe

Fig.10

7. Connect Wire of Indoor Unit

(1) Open the panel, remove the screw on the wiring cover and then take down the cover.(As show in Fig.11)

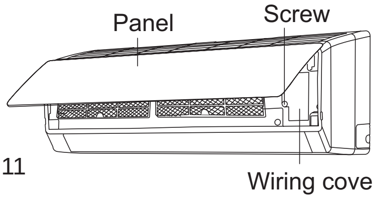

Panel
Screw
Wiring cover

Fig.11

(2) Fix the wire crossing board on connection wire sleeve at the bottom case; let the connection wire sleeve go through the wire crossing hole at the back of indoor unit, and then pull it out from the front.(As show in Fig.12)

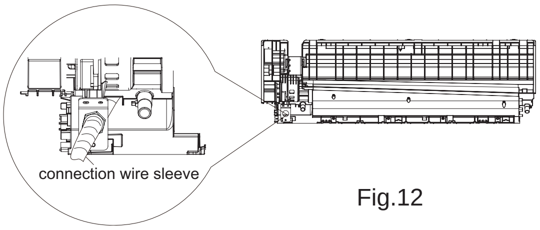

connection wire sleeve

Fig.12

(3) Remove the wire clip; connect the power connection wire to the wiring terminal according to the color; tighten the screw and then fix the power connection wire with wire clip.(As show in Fig.13)

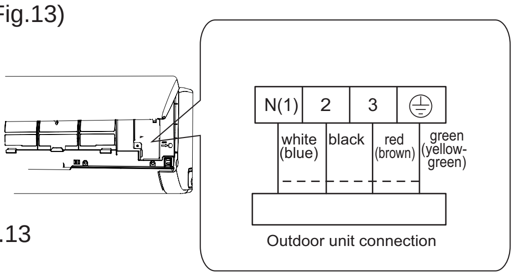

N(1)
2
3
white (blue)
black
red (brown)
green (yellow-green)
Outdoor unit connection

Fig.13

Note: the wiring board is for reference only,please refer to the actual one.

(4) Put wiring cover back and then tighten the screw.

(5) Close the panel.

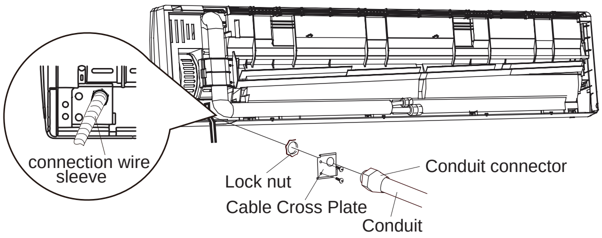
(6) Install the Conduit assy.

a. Fix the conduit assy on the conduit board and then let the connection wire between indoor unit and outdoor unit go through the conduit.

b. Fix the conduit assy on the chassis with 3 screws.

● Conduit assy consists of conduit, conduit connector and lock nut.(Not the standard part, which should be purchased by customer.)

● The length of conduit can be calculated according to the length of connection wire.


connection wire sleeve
Lock nut
Cable Cross Plate
Conduit connector
Conduit

⚠ Note:

(1) All wires of indoor unit and outdoor unit should be connected by a professional.

(2) If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.

(3) For the air conditioner with plug, the plug should be reachable after finishing installation.

(4) For the air conditioner without plug, an air switch must be installed in the line. The air switch should be all-pole parting and the contact parting distance should be more than 1/8inch.

8. Bind up Pipe

(1) Bind up the connection pipe, power cord and drain hose with the band.(As show in Fig.14)

(2) Reserve a certain length of drain hose and power cord for installation when binding them. When binding to a certain degree, separate the indoor power and then separate the drain hose.(As show in Fig.15)

(3) Bind them evenly.

(4) The liquid pipe and gas pipe should be bound separately at the end.

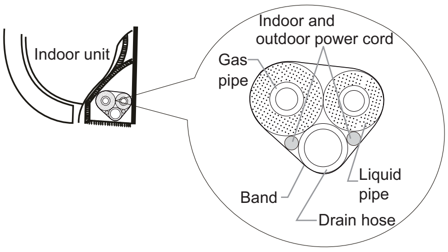

Indoor unit
Indoor and outdoor power cord
Gas pipe
Band
Liquid pipe
Drain hose

Fig.14

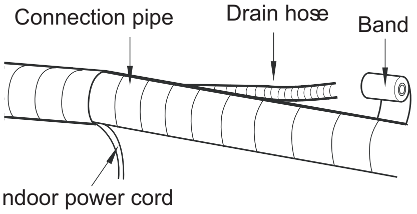

Connection pipe
Drain hose
Band
Indoor power cord

Fig.15

⚠ Note:

(1) The power cord and control wire cant be crossed or winding.

(2) The drain hose should be bound at the bottom.

9. Hang the Indoor Unit

(1) Put the bound pipes in the wall pipe and then make them pass through the wall hole.

(2) Hang the indoor unit on the wall-mounting frame.

(3) Stuff the gap between pipes and wall hole with sealing gum.

(4) Fix the wall pipe.(As show in Fig.16)

(5) Check if the indoor unit is installed firmly and closed to the wall.(As show in Fig.17)

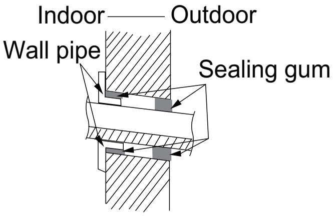
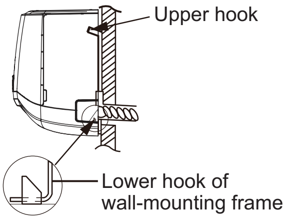

Indoor
Outdoor
Wall pipe
Sealing gum

Fig.16

Fig.17


Upper hook
Lower hook of wall-mounting frame

⚠ Note:

Do not bend the drain hose too excessively in order to prevent blocking.

8.6 Installation of Outdoor Unit

1. Fix the Support of Outdoor Unit(Select it according to the actual installation situation)

(1) Select installation location according to the house structure.

(2) Fix the support of outdoor unit on the selected location with expansion screws.

⚠ **Note:**

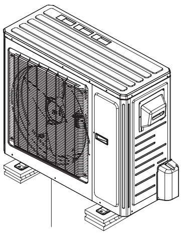
(1) Take sufficient protective measures when installing the outdoor unit.

(2) Make sure the support can withstand at least four times the unit weight.

(3) The outdoor unit should be installed at least 1 11/64 inch above the floor in order to install drain joint.(As show in Fig.18)

(4) For the unit with cooling capacity of 2300W~5000W, 6 expansion screws are needed; for the unit with cooling capacity of 6000W~8000W, 8 expansion screws are needed; for the unit with cooling capacity of 10000W~16000W, 10 expansion screws are needed.

Fig.18


At least 1 11/64 inch above the floor

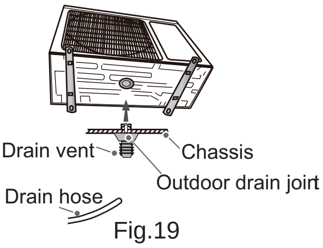

Drain vent
Chassis
Outdoor drain joirt
Drain hose

Fig.19

2. Install Drain Joint(Only for cooling and heating unit)

(1) Connect the outdoor drain joint into the hole on the chassis.

(2) Connect the drain hose into the drain vent.

(As show in Fig.19)

3. Fix Outdoor Unit

(1) Place the outdoor unit on the support.

(2) Fix the foot holes of outdoor unit with bolts.

(As show in Fig.20)

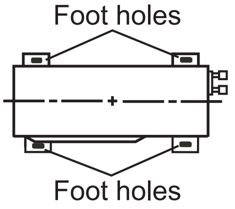

Foot holes
Foot holes

Fig.20

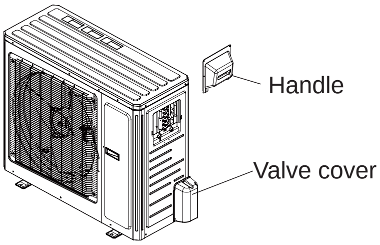

Handle
Valve cover

Fig.22

4. Connect Indoor and Outdoor Pipes

(1) Remove the screw cap of valve and aim the pipe joint at the bellmouth of pipe.(As show in Fig.21)

(2) Pretightening the union nut with hand..(As show in Fig.22)

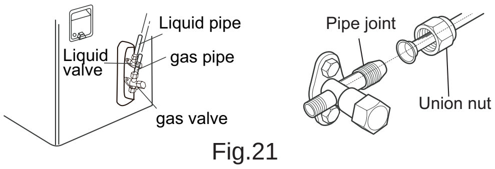

Liquid pipe
Liquid valve
gas pipe
gas valve
Pipe joint
Union nut

Fig.21

(3) Tighten the union nut with torque wrench by referring to the sheet below.

Hex nut diameter(inch)	Tightening torque(ft·lbf)
Φ1/4	11.10~14.75
Φ3/8	20.12~29.50
Φ1/2	33.19~40.56
Φ5/8	44.24~47.94
Φ3/4	51.32~55.31

5. Connect Outdoor Electric Wire

(1) Remove the handle from the outdoor unit.

(2) Fasten the power supply cord and the connection cord to the retaining plate using the lock nut.(open the knock out holes if necessary)

(3) Connect the power supply cord and the connection cord to terminal.

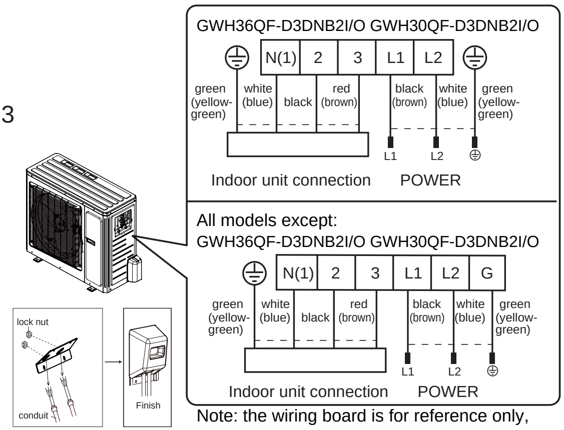
(4) Fasten the power supply cord and connection cord with cord clamp.

(5) Install the handle.

The screws are packed with the terminal board.

(6) Fix the power connection wire and signal control wire with wire clip (only for cooling and heating unit).

Fig.23


GWH36QF-D3DNB2I/O GWH30QF-D3DNB2I/O
N(1)
2
3
L1
L2
green (yellow-green)
white (blue)
black
red (brown)
black (brown)
white (blue)
green (yellow-green)
L1
L2
Indoor unit connection
POWER
All models except:
GWH36QF-D3DNB2I/O GWH30QF-D3DNB2I/O
N(1)
2
3
L1
L2
G
green (yellow-green)
white (blue)
black
red (brown)
black (brown)
white (blue)
green (yellow-green)
L1
L2
Indoor unit connection
POWER
lock nut
conduit
Finish

Note: the wiring board is for reference only, please refer to the actual one.

⚠ **Note:**

(1) After tightening the screw, pull the power cord slightly to check if it is firm.

(2) Never cut the power connection wire to prolong or shorten the distance.

6. Neaten the Pipes

(1) The pipes should be placed along the wall, bent reasonably and hidden possibly. Min. semidiameter of bending the pipe is 4 inch.

(2) If the outdoor unit is higher than the wall hole, you must set a U-shaped curve in the pipe before pipe goes into the room, in order to prevent rain from getting into the room.(As show in Fig.24)

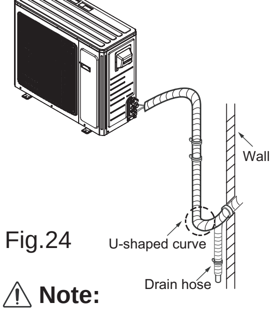

Wall
U-shaped curve
Drain hose

Fig.24

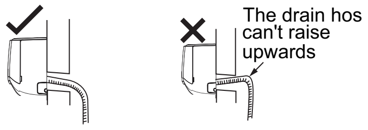

✓
✗
The drain hos can't raise upwards

Fig.25

⚠ **Note:**

(1) The through-wall height of drain hose shouldnt be higher than the outlet pipe hole of indoor unit.(As show in Fig.25)

(2) Slant the drain hose slightly downwards. The drain hose cant be curved, raised and fluctuant, etc.(As show in Fig.26)

(3) The water outlet cant be placed in water in order to drain smoothly.(As show in Fig.27)

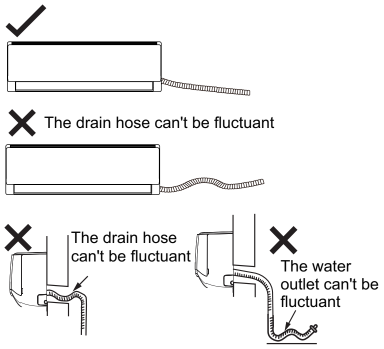

The drain hose can't be fluctuant
The drain hose can't be fluctuant
The water outlet can't be fluctuant

Fig.26

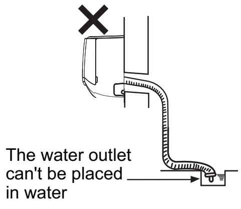


Fig.27

8.7 Vacuum Pumping and Leak Detection

1. Use Vacuum Pump

(1) Remove the valve caps on the liquid valve and gas valve and the nut of refrigerant charging vent.

(2) Connect the charging hose of piezometer to the refrigerant charging vent of gas valve and then connect the other charging hose to the vacuum pump.

(3) Open the piezometer completely and operate for 10-15min to check if the pressure of piezometer remains in -0.1MPa.

(4) Close the vacuum pump and maintain this status for 1-2min to check if the pressure of piezometer remains in -0.1MPa. If the pressure decreases, there may be leakage.

(5) Remove the piezometer, open the valve core of liquid valve and gas valve completely with inner hexagon spanner.

(6) Tighten the screw caps of valves and refrigerant charging vent.(As show in Fig.28)

(7) Reinstall the handle.

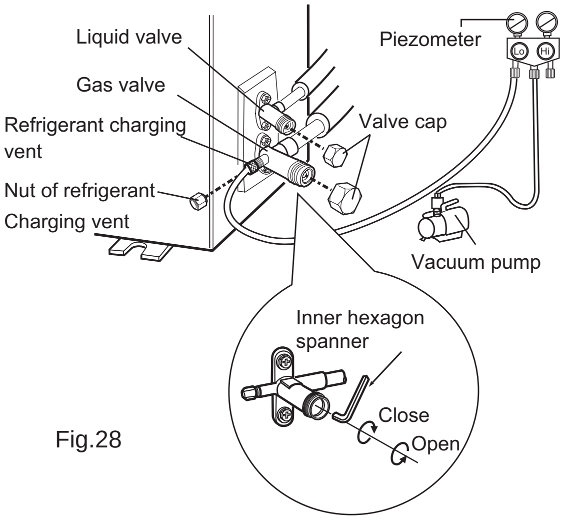


Fig.28

2. Leakage Detection

(1) With leakage detector:

Check if there is leakage with leakage detector.

(2) With soap water:

If leakage detector is not available, please use soap water for leakage detection. Apply soap water at the suspected position and keep the soap water for more than 3min. If there are air bubbles coming out of this position, theres a leakage.

8.8 Check after Installation and Test Operation

1. Check after Installation

Check according to the following requirement after finishing installation.

NO.	Items to be checked	Possible malfunction
1	Has the unit been installed firmly?	The unit may drop, shake or emit noise.
2	Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating) capacity.
3	Is heat insulation of pipeline sufficient?	It may cause condensation and water dripping.
4	Is water drained well?	It may cause condensation and water dripping.
5	Is the voltage of power supply according to the voltage marked on the nameplate?	It may cause malfunction or damage the parts.
6	Is electric wiring and pipeline installed correctly?	It may cause malfunction or damage the parts.
7	Is the unit grounded securely?	It may cause electric leakage.
8	Does the power cord follow the specification?	It may cause malfunction or damage the parts.
9	Is there any obstruction in air inlet and air outlet?	It may cause insufficient cooling (heating)capacity.
10	The dust and sundries caused during installation are removed?	It may cause malfunction or damaging the parts.
11	The gas valve and liquid valve of connection pipe are open completely?	It may cause insufficient cooling (heating) capacity.
12	Is the inlet and outlet of piping hole been covered?	It may cause insufficient cooling(heating) capacity or waster eletricity.

2. Test Operation

(1) Preparation of test operation

- The client approves the air conditioner installation.
- Specify the important notes for air conditioner to the client.

(2) Method of test operation

- Put through the power, press ON/OFF button on the remote controller to start operation.
- Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.
- If the ambient temperature is lower than 16ºC(61ºF), the air conditioner cant start cooling.

9. Troubleshooting

9.1 Flashing LED of Indoor/Outdoor Unit and Primary Judgement

NO.	Malfunction Name	Display Method of Indoor Unit				A/C status	Possible Causes
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator	Heating Indicator		
1	High pressure protection of system	E1	OFF 3s and blink once			During cooling and drying operation, except indoor fan operates, all loads stop operation. During heating operation, the complete unit stops.	Possible reasons: 1. Refrigerant was superabundant; 2. Poor heat exchange (including filth blockage of heat exchanger and bad radiating environment); Ambient temperature is too high.
2	Antifreezing protection	E2	OFF 3S and blink twice			During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates.	1. Poor air-return in indoor unit; 2. Fan speed is abnormal; 3. Evaporator is dirty.
3	In defect of refrigerant	F0				The Dual-8 Code Display will show F0 and the complete unit stops.	1.In defect of refrigerant; 2.Indoor evaporator temperature sensor works abnormally; 3.The unit has been plugged up somewhere.
4	High discharge temperature protection of compressor	E4	OFF 3S and blink 4 times			During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	Please refer to the malfunction analysis (discharge protection, overload).
5	Overcurrent protection	E5	OFF 3S and blink 5 times			During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	1. Supply voltage is unstable; 2. Supply voltage is too low and load is too high; 3. Evaporator is dirty.
6	Communi-cation Malfunction	E6	OFF 3S times			During cooling operation, compressor stops while indoor fan motor operates. During heating operation, the complete unit stops.	Refer to the corresponding malfunction analysis.
7	High temperature resistant protection	E8	OFF 3S and blink 8 times			During cooling operation: compressor will stop while indoor fan will operate. During heating operation, the complete unit stops.	Refer to the malfunction analysis (overload, high temperature resistant).
8	EEPROM malfunction	EE			OFF 3S and blink 15 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Replace outdoor control panel AP1
9	Limit/ decrease frequency due to high temperature of module	EU		OFF 3S and blink 6 times	OFF 3S and blink 6 times	All loads operate normally, while operation frequency for compressor is decreased	Discharging after the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1.
10	Malfunction protection of jumper cap	C5	OFF 3S and blink 15 times			Wireless remote receiver and button are effective, but can not dispose the related command	1. No jumper cap insert on mainboard. 2. Incorrect insert of jumper cap. 3. Jumper cap damaged. 4. Abnormal detecting circuit of mainboard.

NO.	Malfunction Name	Display Method of Indoor Unit				A/C status	Possible Causes
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator	Heating Indicator		
11	Gathering refrigerant	Fo	OFF 3S and blink 1 times			When the outdoor unit receive signal of Gathering refrigerant ,the system will be forced to run under cooling mode for gathering refrigerant	Nominal cooling mode
12	Indoor ambient temperature sensor is open/short circuited	F1		OFF 3S and blink once		During cooling and drying operation, indoor unit operates while other loads will stop; during heating operation, the complete unit will stop operation.	1. Loosening or bad contact of indoor ambient temp. sensor and mainboard terminal. 2. Components in mainboard fell down leads short circuit. 3. Indoor ambient temp. sensor damaged.(check with sensor resistance value chart) 4. Mainboard damaged.
13	Indoor evaporator temperature sensor is open/short circuited	F2		OFF 3S and blink twice		AC stops operation once reaches the setting temperature. Cooling, drying: internal fan motor stops operation while other loads stop operation; heating: AC stop operation	1. Loosening or bad contact of Indoor evaporator temp. sensor and mainboard terminal. 2. Components on the mainboard fall down leads short circuit. 3. Indoor evaporator temp. sensor damaged.(check temp. sensor value chart for testing) 4. Mainboard damaged.
14	Outdoor ambient temperature sensor is open/short circuited	F3		OFF 3S and blink 3 times		During cooling and drying operating, compressor stops while indoor fan operates; During heating operation, the complete unit will stop operation	Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
15	Outdoor condenser temperature sensor is open/short circuited	F4		OFF 3S and blink 4 times		During cooling and drying operation, compressor stops while indoor fan will operate; During heating operation, the complete unit will stop operation.	Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
16	Outdoor discharge temperature sensor is open/short circuited	F5		OFF 3S and blink 5 times		During cooling and drying operation, compressor will sop after operating for about 3 mins, while indoor fan will operate; During heating operation, the complete unit will stop after operating for about 3 mins.	1.Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) 2.The head of temperature sensor hasnt been inserted into the copper tube
17	Limit/ decrease frequency due to overload	F6		OFF 3S and blink for 6 times		All loads operate normally, while operation frequency for compressor is decreased	Refer to the malfunction analysis (overload, high temperature resistant)
18	Decrease frequency due to overcurrent	F8		OFF 3S and blink 8 times		All loads operate normally, while operation frequency for compressor is decreased	The input supply voltage is too low; System pressure is too high and overload

NO.	Malfunction Name	Display Method of Indoor Unit				A/C status	Possible Causes
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator	Heating Indicator		
19	Decrease frequency due to high air discharge	F9		OFF 3S and blink 9 times		All loads operate normally, while operation frequency for compressor is decreased	Overload or temperature is too high; Refrigerant is insufficient; Malfunction of electric expansion valve (EKV)
20	Limit/ decrease frequency due to antifreezing	FH		OFF 3S and blink 2 times	OFF 3S and blink 2 times	All loads operate normally, while operation frequency for compressor is decreased	Poor air-return in indoor unit or fan speed is too low
21	Voltage for DC bus-bar is too high	PH		OFF 3S and blink 11 times		During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 265VAC, turn on the unit after the supply voltage is increased to the normal range. 2.If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if its normal, theres malfunction for the circuit, please replace the control panel (AP1)
22	Voltage of DC bus-bar is too low	PL			OFF 3S and blink 21 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 150VAC, turn on the unit after the supply voltage is increased to the normal range. 2.If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if its normal, theres malfunction for the circuit, please replace the control panel (AP1)
23	Compressor Min frequence in test state	P0		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)		Showing during min. cooling or min. heating test
24	Compressor rated frequence in test state	P1		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)		Showing during nominal cooling or nominal heating test
25	Compressor maximum frequence in test state	P2		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)		Showing during max. cooling or max. heating test

NO.	Malfunction Name	Display Method of Indoor Unit				A/C status	Possible Causes
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator	Heating Indicator		
26	Compressor intermediate frequence in test state	P3		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)		Showing during middle cooling or middle heating test
27	Overcurrent protection of phase current for compressor	P5		OFF 3S and blink 15 times		During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor.
28	Charging malfunction of capacitor	PU			OFF 3S and blink 17 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Refer to the part three—charging malfunction analysis of capacitor
29	Malfunction of module temperature sensor circuit	P7			OFF 3S and blink 18 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Replace outdoor control panel AP1
30	Module high temperature protection	P8			OFF 3S and blink 19 times	During cooling operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	After the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1.
31	Decrease frequency due to high temperature resistant during heating operation	H0			OFF 3S and blink 10 times	All loads operate normally, while operation frequency for compressor is decreased	Refer to the malfunction analysis (overload, high temperature resistant)
32	Static dedusting protection	H2			OFF 3S and blink twice		
33	Overload protection for compressor	H3			OFF 3S and blink 3 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	1. Wiring terminal OVC-COMP is loosened. In normal state, the resistance for this terminal should be less than 1ohm. 2.Refer to the malfunction analysis (discharge protection, overload)

NO.	Malfunction Name	Display Method of Indoor Unit				A/C status	Possible Causes
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator	Heating Indicator		
34	System is abnormal	H4			OFF 3S and blink 4 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (overload, high temperature resistant)
35	IPM protection	H5			OFF 3S and blink 5 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor.
36	PFC protection	HC				During cooling and drying operation, compressor will stopwhile indoor fan will operate;During heating operation, the complete unit will stop operation.	Replace outdoor control panel AP1 or Reactor
37	Internal motor (fan motor) do not operate	H6	OFF 3S and blink 11 times			Internal fan motor, external fan motor, compressor and electric heater stop operation,guide louver stops at present location.	1. Bad contact of DC motor feedback terminal. 2. Bad contact of DC motor control end. 3. Fan motor is stalling. 4. Motor malfunction. 5. Malfunction of mainboard rev detecting circuit.
38	Desynchro-nizing of compressor	H7			OFF 3S and blink 7 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor.
39	Malfunction of detecting plate(WIFI)	JF				Loads operate normally, while the unit can't be normally controlled by APP	1.Main board of indoor unit is damaged; 2.Detection board is damaged; 3.The connection between indoor unit and detection board is not good;
40	Outdoor DC fan motor malfunction	L3	OFF 3S and blink 23 times			Outdoor DC fan motor malfunction lead to compressor stop operation,	DC fan motor malfunction or system blocked or the connector loosed
41	power protection	L9	OFF 3S and blink 20 times			compressor stop operation and Outdoor fan motor will stop 30s latter , 3 minutes latter fan motor and compressor will restart	To protect the electronical components when detect high power
42	Indoor unit and outdoor unit doesn't match	LP	OFF 3S and blink 19 times			compressor and Outdoor fan motor can't work	Indoor unit and outdoor unit doesn't match
43	Failure start-up	LC			OFF 3S and blink 11 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis

NO.	Malfunction Name	Display Method of Indoor Unit				A/C status	Possible Causes
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)				
			Operation Indicator	Cool Indicator	Heating Indicator		
44	Malfunction of phase current detection circuit for compressor	U1			OFF 3S and blink 13 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Replace outdoor control panel AP1
45	Malfunction of voltage dropping for DC bus-bar	U3			OFF 3S and blink 20 times	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Supply voltage is unstable
46	Malfunction of complete units current detection	U5		OFF 3S and blink 13 times		During cooling and drying operation, the compressor will stop while indoor fan will operate; During heating operating, the complete unit will stop operation.	Theres circuit malfunction on outdoor units control panel AP1, please replace the outdoor units control panel AP1.
47	The four-way valve is abnormal	U7		OFF 3S and blink 20 times		If this malfunction occurs during heating operation, the complete unit will stop operation.	1.Supply voltage is lower than AC175V; 2.Wiring terminal 4V is loosened or broken; 3.4V is damaged, please replace 4V.
48	Zero-crossing malfunction of outdoor unit	U9	OFF 3S and blink 18 times			During cooling operation, compressor will stop while indoor fan will operate; during heating,the complete unit will stop operation.	Replace outdoor control panel AP1
49	Defrosting				once (during blinking, ON 10s and OFF	heating mode. Compressor will operate while indoor fan will stop	Its the normal state

50	Undefined outdoor unit error	oE				Cool: compressor and outdoor fan stops operation, while indoor fan operates; Heat: compressor, outdoor fan and indoor fan stop operation.	1. Outdoor ambient temperature exceeds the operation range of unit (eg: less than-20oC or more than 60oC for cooling; more than 30oC for heating); 2. Failure startup of compressor? 3. Are wires of compressor not connected tightly? 4. Is compressor damaged? 5. Is main board damaged?
51	Anti-freezing protection for evaporator	E2				Not the error code. It's the status code for the operation.	
52	Cold air prevention protection	E9				Not the error code. It's the status code for the operation.	
53	Refrigerant recovery mode	Fo				Refrigerant recovery. The Serviceman operates it for maintenance	

Analysis or processing of some of the malfunction display:

1. Compressor discharge protection

Possible reasons: shortage of refrigerant; blockage of air filter; poor ventilation or air flow short pass for condenser;the system has noncondensing gas (such as air, water etc.); blockage of capillary assy (including filter); leakage inside four-way valve causes incorrect operation; malfunction of compressor; malfunction of protection relay; malfunction of discharge sensor; outdoor temperature too high.

Processing method: refer to the malfunction analysis in the above section.

2. Low voltage overcurrent protection

Possible reason: Sudden drop of supply voltage.

3. Communic ation malfun ction

Processing method: Check if communic ation signal cable is connected reliably.

4. Sensor open or short circuit

Processing method: Check whethers ensor is normal, connected with the corre sponding position on the controller and if damage of lead wire is found.

5. Compressor over load protection

Possible reasons: insufficient or too much refrigrant; blockage of capillary an dincrease of suction temp.; improper running of compressor, burning in or stuck of bearing, damage of discharge valve; malfunction of protector.

Processing method: adjust refrige rant amount; replace the capillary; replace the compressor; use univers al meter to check if the contactor of compress or is fine when it is not over heated, if not replace the protector.

6. System malfun ction

Overload protection.When tube temperature(Check the temperature of outdoor heat exchanger when cooling and check the temperature of indoor heat exchanger when heating) is too high, protection will beactivated.

Possible reasons: Outdoor tempera ture is too high when cooling; insufficient outdoor air circulation; refrigerant flow malfunction.

Please refer to the malfunction analysis in the previous section for handling method .

7. IPM module protection

Processing method:Once the module malfunction happens,if it persists for a long time and can not be self-canceled, cut off the power and turn off the unit,and then re-energize the unit again after about 10 min.After repeating the procedure for sever times, if the malfunction still exists,replace the module.

9.2 How to Check Simply the Main Part

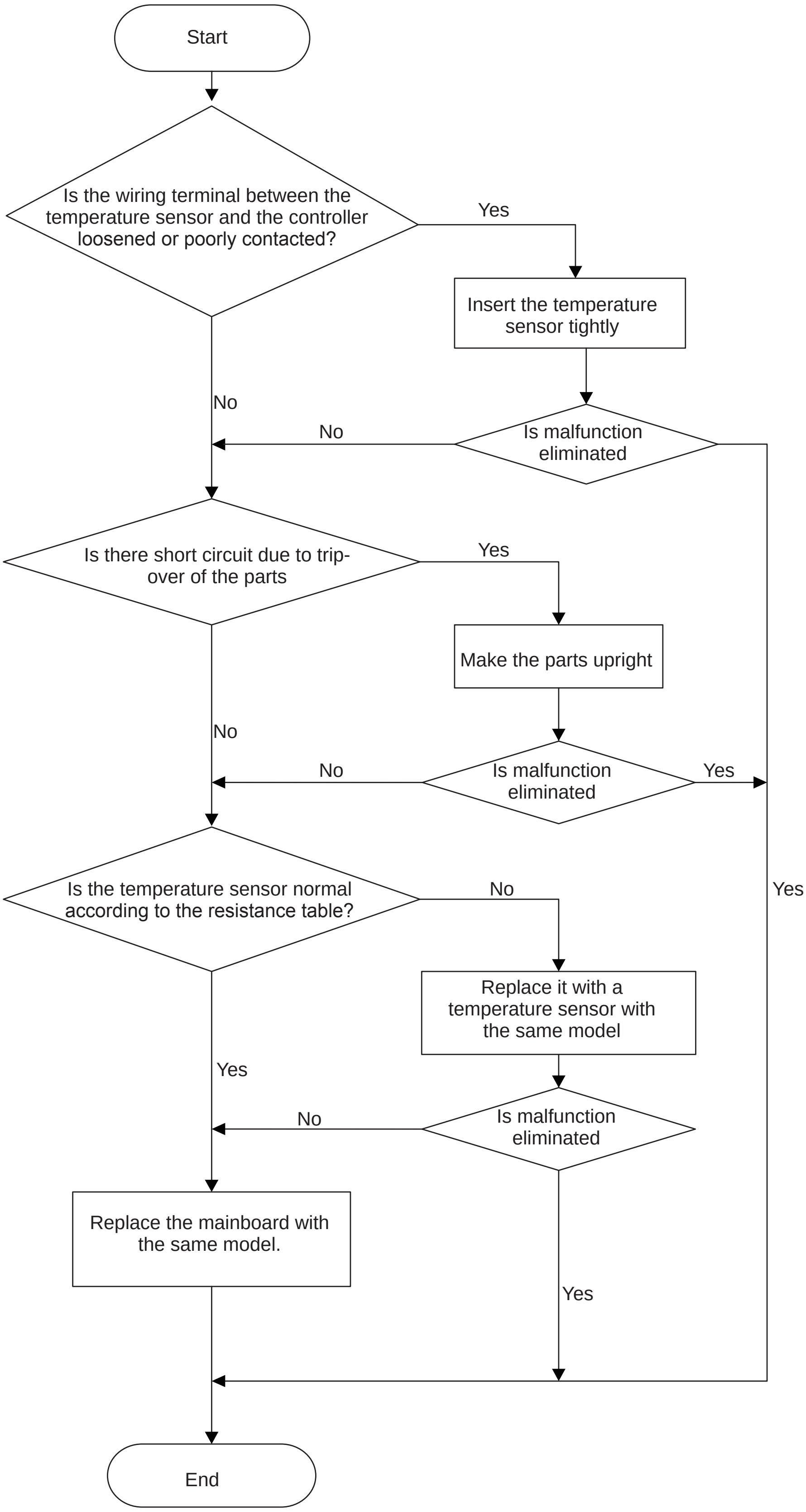
Indoor unit

1. Malfunction of Temperature Sensor F1, F2

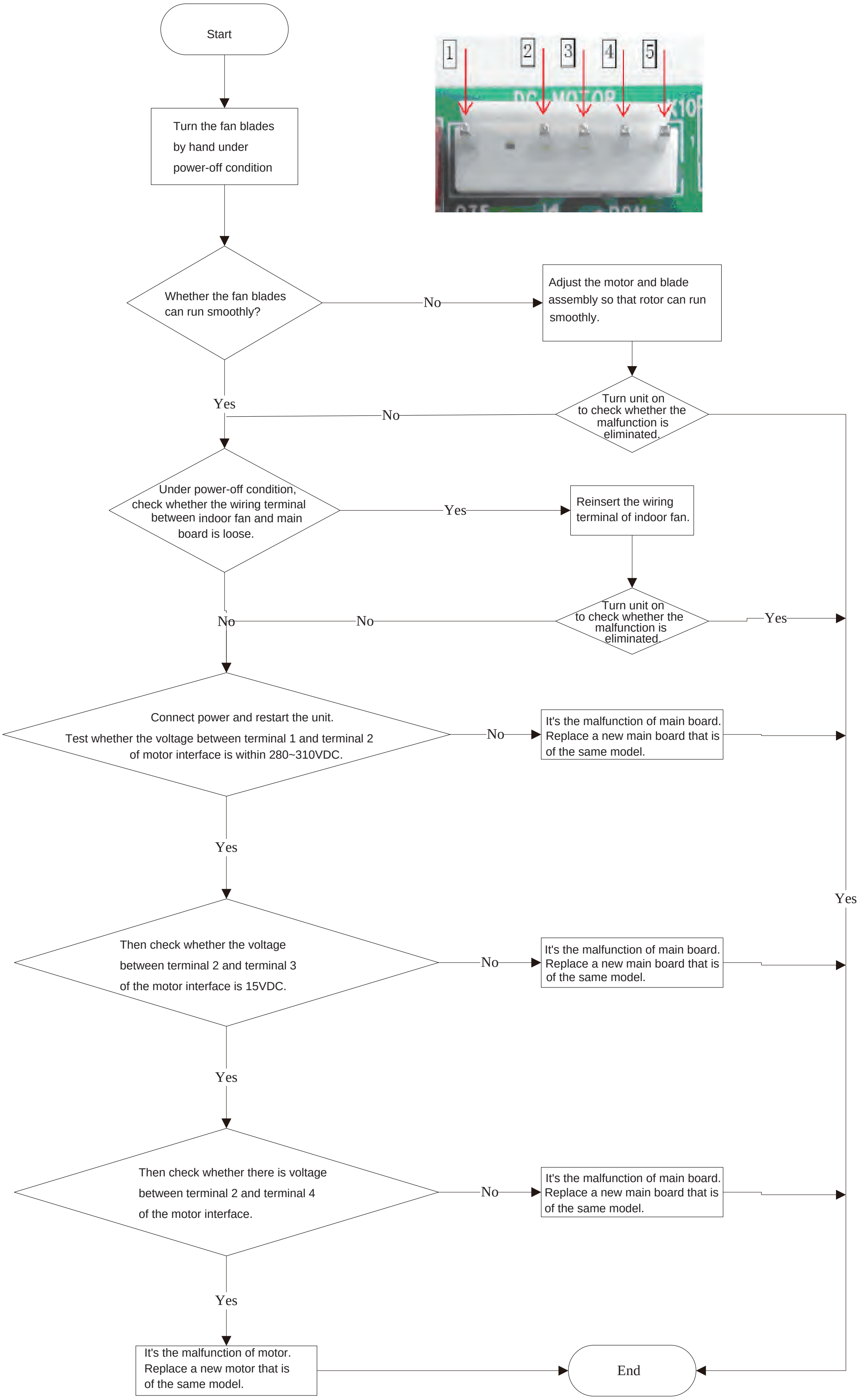
Main detection points:

- Is the wiring terminal between the temperature sensor and the controller loosened or poorly contacted?
- Is there short circuit due to trip-over of the parts?
- Is the temperature sensor broken?
- Is mainboard broken?

Malfunction diagnosis process:


Start
Is the wiring terminal between the temperature sensor and the controller loosened or poorly contacted?
Yes
Insert the temperature sensor tightly
No
No
Is malfunction eliminated
Is there short circuit due to trip-over of the parts
Yes
Make the parts upright
No
No
Is malfunction eliminated
Yes
Is the temperature sensor normal according to the resistance table?
No
Yes
Replace it with a temperature sensor with the same model
Yes
No
Is malfunction eliminated
Replace the mainboard with the same model.
Yes
End

2.Malfunction of Blocked Protection of IDU Fan Motor H6

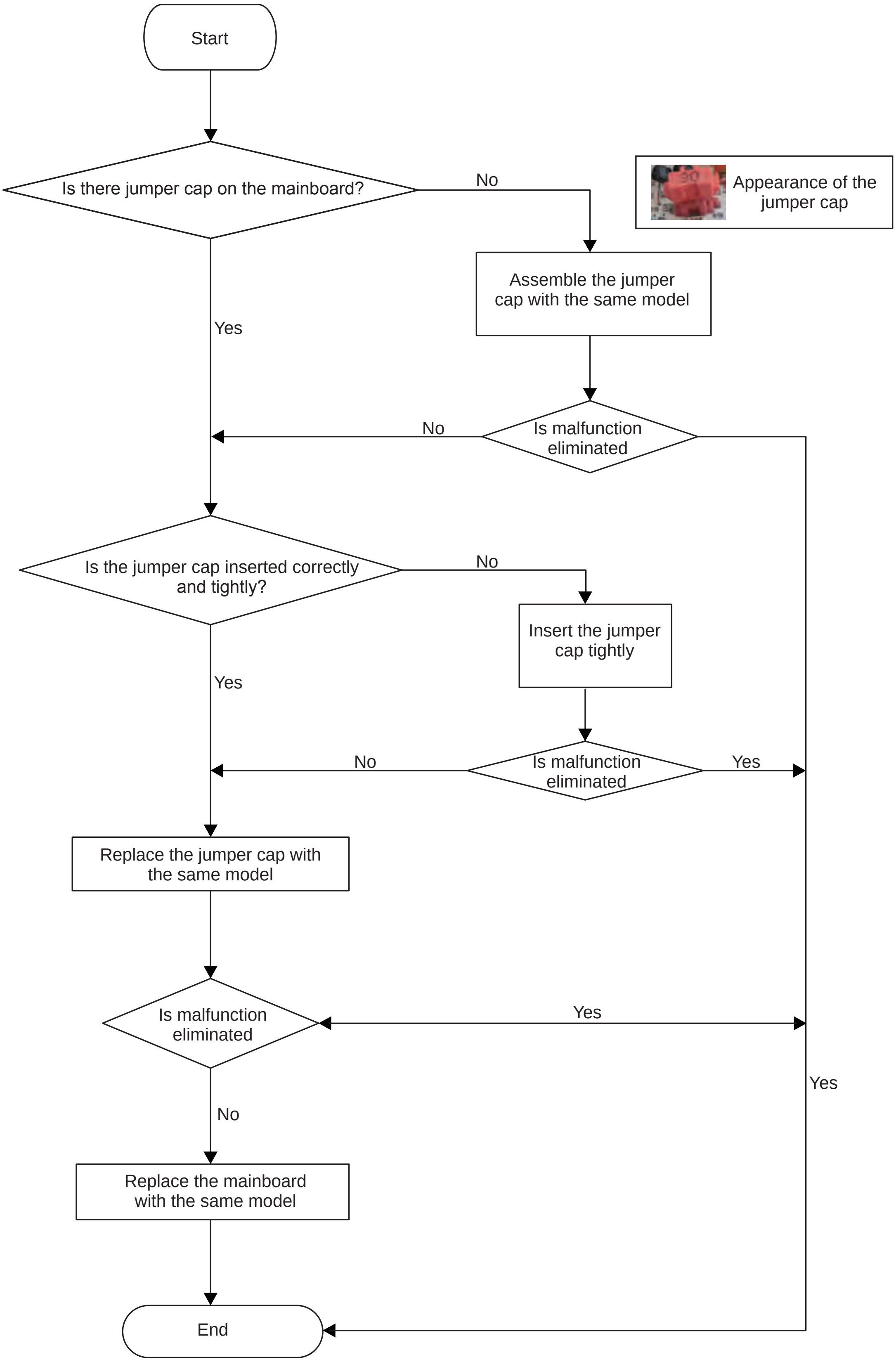

Start
1
2
3
4
5
DC MOTOR
Turn the fan blades by hand under power-off condition
Whether the fan blades can run smoothly?
No
Adjust the motor and blade assembly so that rotor can run smoothly.
Turn unit on to check whether the malfunction is eliminated.
Yes
No
Under power-off condition, check whether the wiring terminal between indoor fan and main board is loose.
Yes
Reinsert the wiring terminal of indoor fan.
Turn unit on to check whether the malfunction is eliminated.
No
No
Yes
Connect power and restart the unit.
Test whether the voltage between terminal 1 and terminal 2 of motor interface is within 280~310VDC.
No
It's the malfunction of main board. Replace a new main board that is of the same model.
Yes
Then check whether the voltage between terminal 2 and terminal 3 of the motor interface is 15VDC.
No
It's the malfunction of main board. Replace a new main board that is of the same model.
Yes
Then check whether there is voltage between terminal 2 and terminal 4 of the motor interface.
No
It's the malfunction of main board. Replace a new main board that is of the same model.
Yes
It's the malfunction of motor. Replace a new motor that is of the same model.
End
Yes

3. Malfunction of Protection of Jumper Cap C5

Main detection points:

- Is there jumper cap on the mainboard?
- Is the jumper cap inserted correctly and tightly?
- The jumper is broken?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

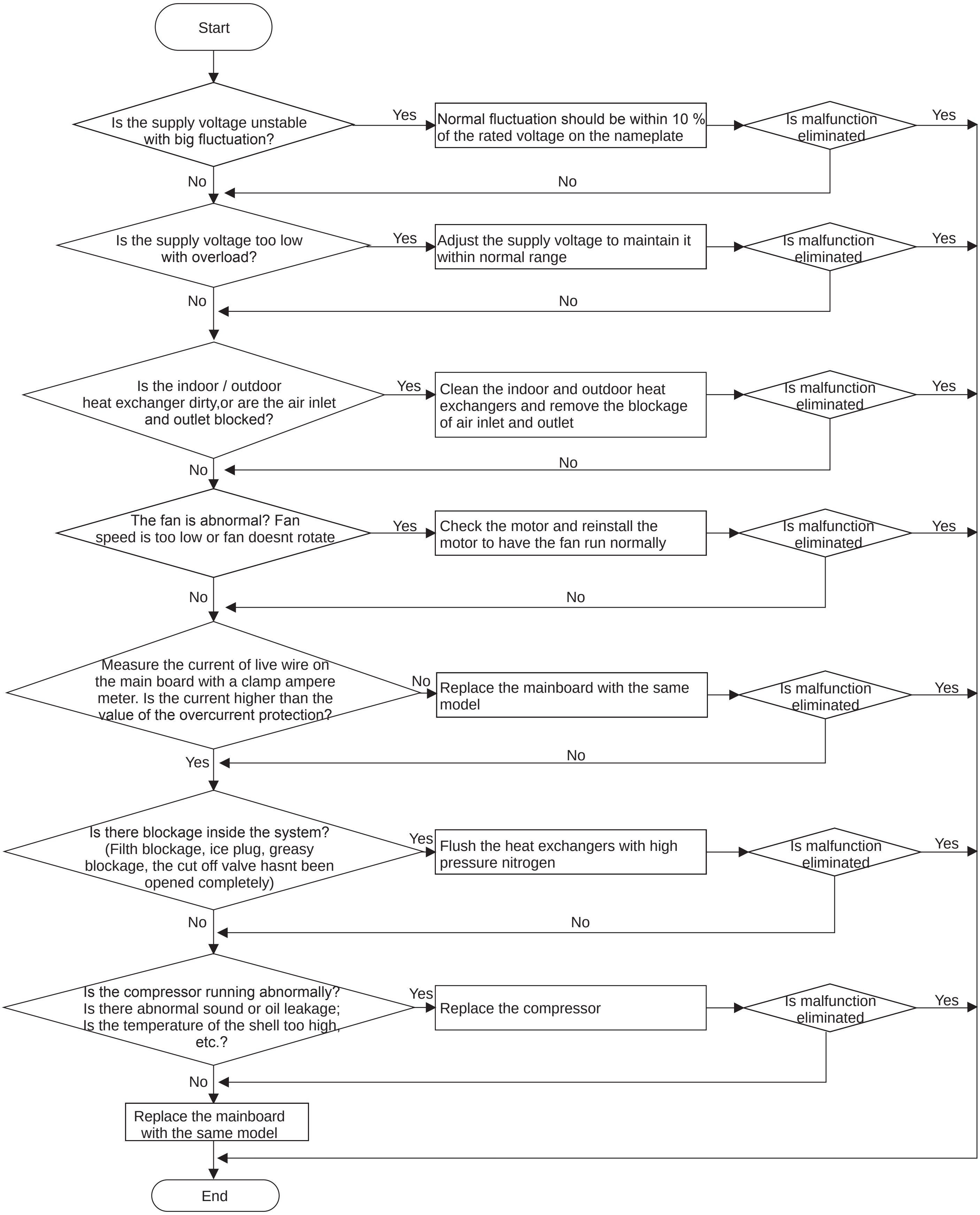

Start
Is there jumper cap on the mainboard?
No
Appearance of the jumper cap
Assemble the jumper cap with the same model
Yes
No
Is malfunction eliminated
Is the jumper cap inserted correctly and tightly?
No
Insert the jumper cap tightly
Yes
No
Is malfunction eliminated
Yes
Replace the jumper cap with the same model
Is malfunction eliminated
Yes
Yes
No
Replace the mainboard with the same model
End

4. Malfunction of Overcurrent Protection E5

Main detection points:

- Is the supply voltage unstable with big fluctuation?
- Is the supply voltage too low with overload?
- Hardware trouble?

Malfunction diagnosis process:

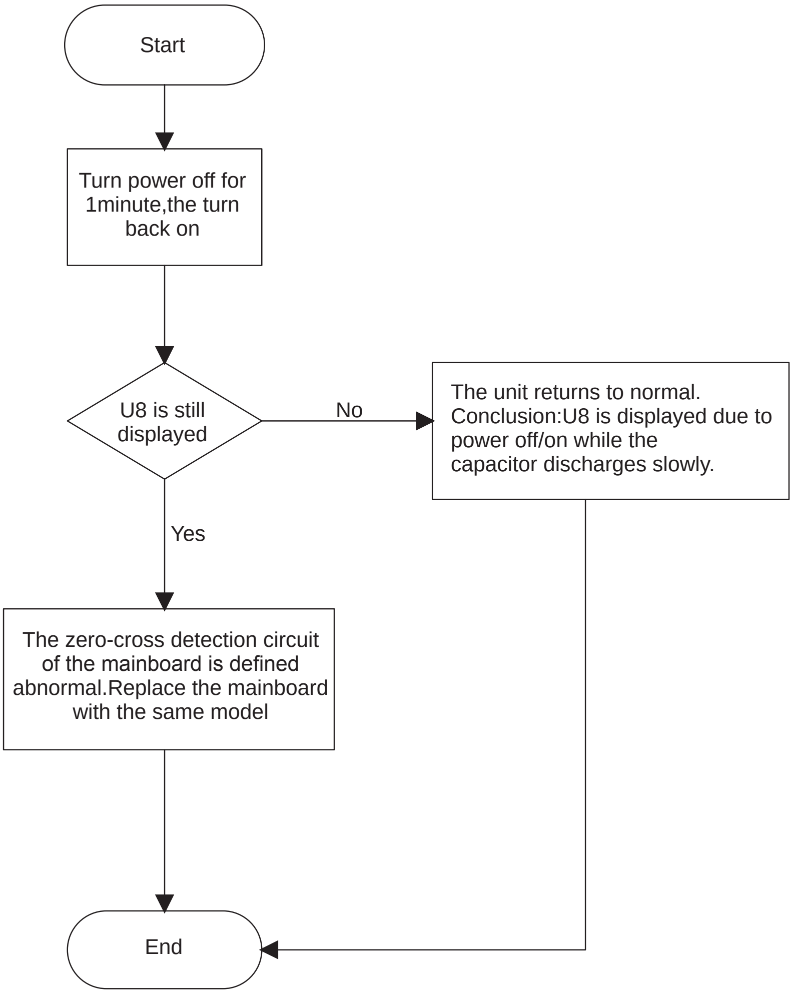

Start
Is the supply voltage unstable with big fluctuation?
Yes
Normal fluctuation should be within 10 % of the rated voltage on the nameplate
Is malfunction eliminated
Yes
No
No
Is the supply voltage too low with overload?
Yes
Adjust the supply voltage to maintain it within normal range
Is malfunction eliminated
Yes
No
No
Is the indoor / outdoor heat exchanger dirty,or are the air inlet and outlet blocked?
Yes
Clean the indoor and outdoor heat exchangers and remove the blockage of air inlet and outlet
Is malfunction eliminated
Yes
No
No
The fan is abnormal? Fan speed is too low or fan doesnt rotate
Yes
Check the motor and reinstall the motor to have the fan run normally
Is malfunction eliminated
Yes
No
No
Measure the current of live wire on the main board with a clamp ampere meter. Is the current higher than the value of the overcurrent protection?
No
Replace the mainboard with the same model
Is malfunction eliminated
Yes
Yes
No
Is there blockage inside the system? (Filth blockage, ice plug, greasy blockage, the cut off valve hasnt been opened completely)
Yes
Flush the heat exchangers with high pressure nitrogen
Is malfunction eliminated
Yes
No
No
Is the compressor running abnormally? Is there abnormal sound or oil leakage; Is the temperature of the shell too high, etc.?
Yes
Replace the compressor
Is malfunction eliminated
Yes
No
No
Replace the mainboard with the same model
End

5. Malfunction of Zero-crossing Inspection Circuit Malfunction of the IDU Fan Motor U8

Main detection points:

- Instant energization afte de-energization while the capacitordischarges slowly?
- The zero-cross detectioncircuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

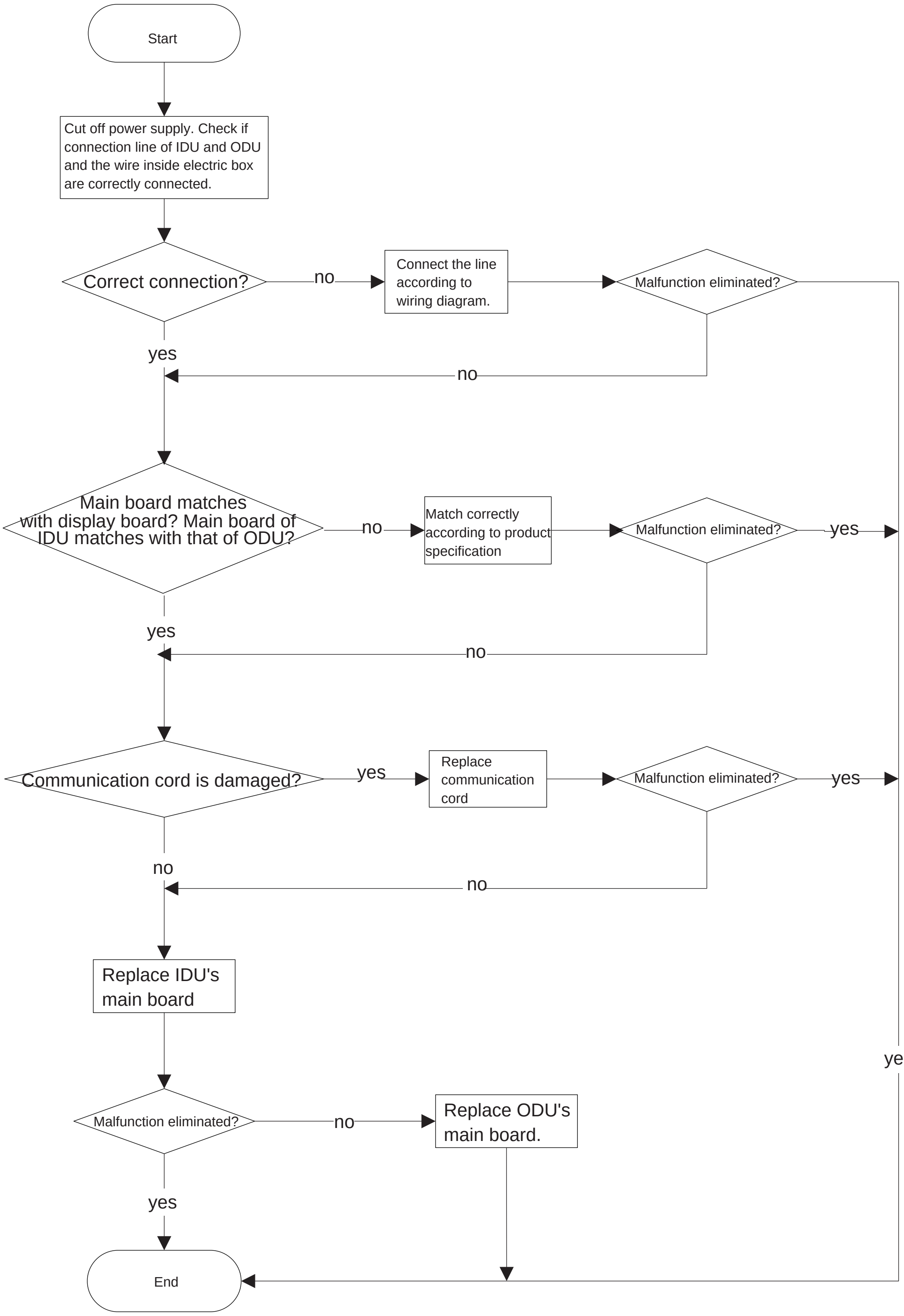

Start
Turn power off for 1minute,the turn back on
U8 is still displayed
No
The unit returns to normal. Conclusion:U8 is displayed due to power off/on while the capacitor discharges slowly.
Yes
The zero-cross detection circuit of the mainboard is defined abnormal.Replace the mainboard with the same model
End

6.Malfunction of communication E6

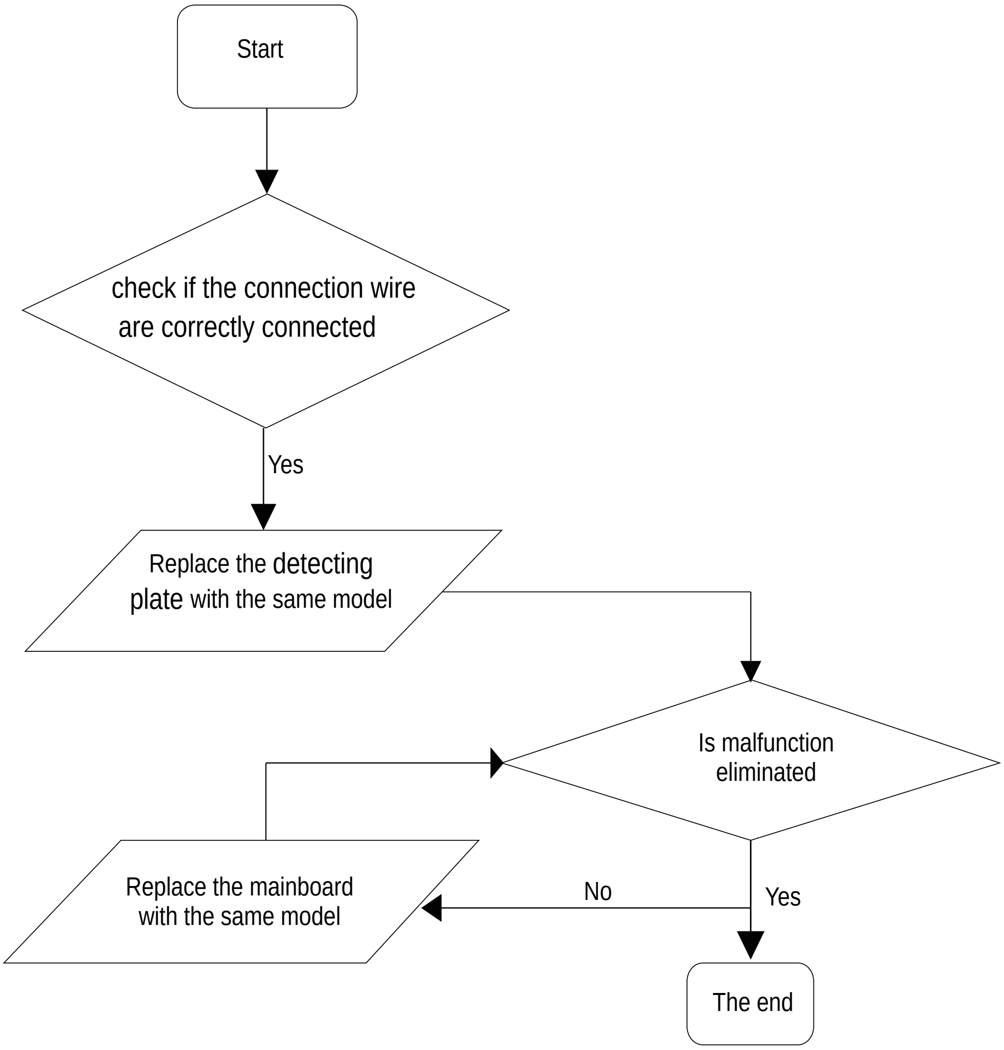
Main detection points:

- Check if the connection wire and the built-in wiring of indoor and outdoor unit are connected well and without damage;
- If the communication circuit of indoor mainboard is damaged? If the communication circuit of outdoor mainboard (AP1) is damaged?

Malfunction diagnosis process:


Start
Cut off power supply. Check if connection line of IDU and ODU and the wire inside electric box are correctly connected.
Correct connection?
no
Connect the line according to wiring diagram.
Malfunction eliminated?
yes
no
Main board matches with display board? Main board of IDU matches with that of ODU?
no
Match correctly according to product specification
Malfunction eliminated?
yes
yes
no
Communication cord is damaged?
yes
Replace communication cord
Malfunction eliminated?
yes
no
no
Replace IDU's main board
yes
Malfunction eliminated?
no
Replace ODU's main board.
yes
End

7. Malfunction of detecting plate(WIFI) JF


Start
check if the connection wire are correctly connected
Yes
Replace the detecting plate with the same model
Is malfunction eliminated
No
Yes
Replace the mainboard with the same model
The end

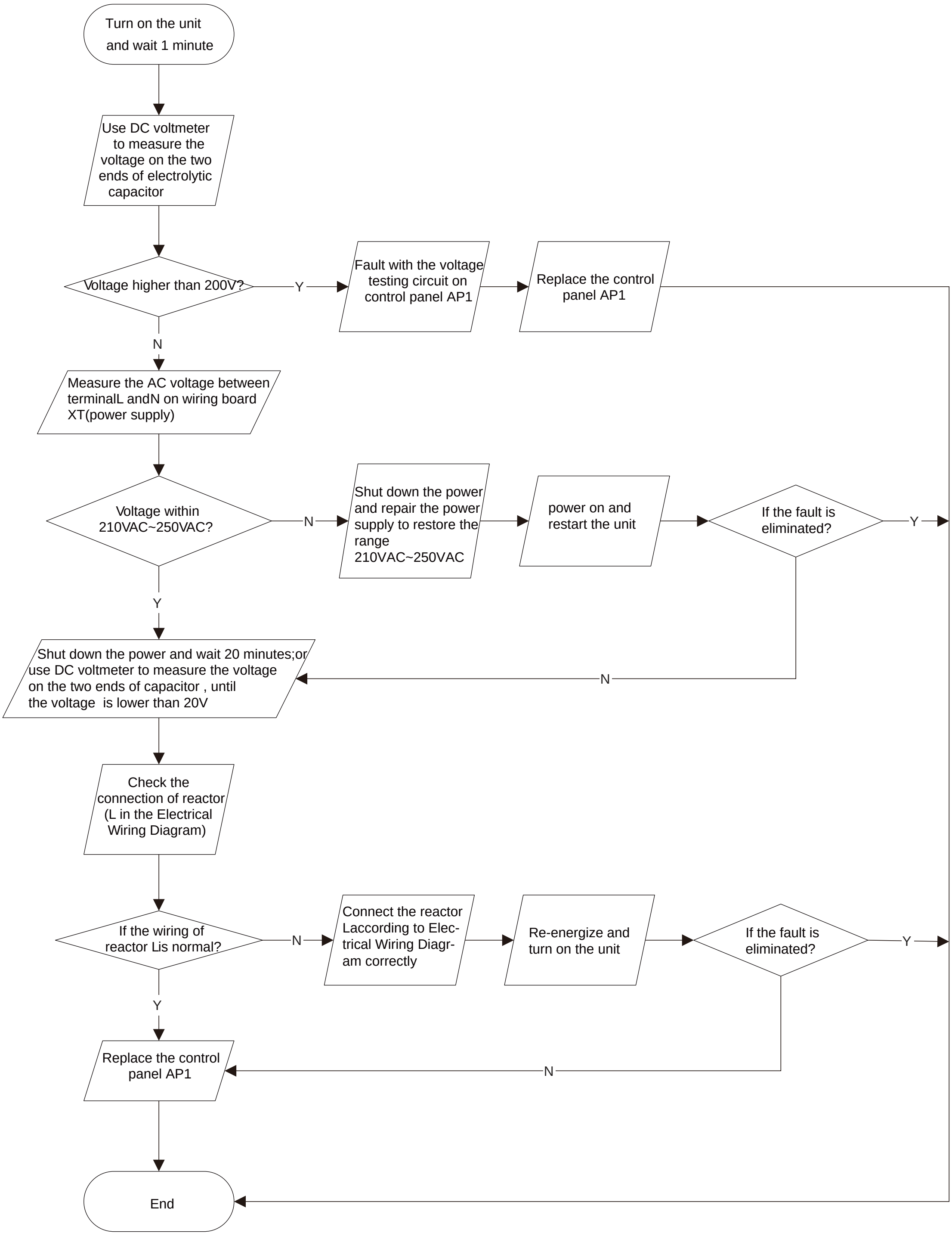
Outdoor unit

(1) Capacitor charge fault (Fault with outdoor unit) (AP1 below refers to the outdoor control panel)

Main Check Points:

- Use AC voltmeter to check if the voltage between terminal L and N on the wiring board is within 210VAC~240VAC.
- If the reactor (L) is correctly connected? If the connection is loose or fallen? If the reactor (L) is damaged?

Fault diagnosis process:

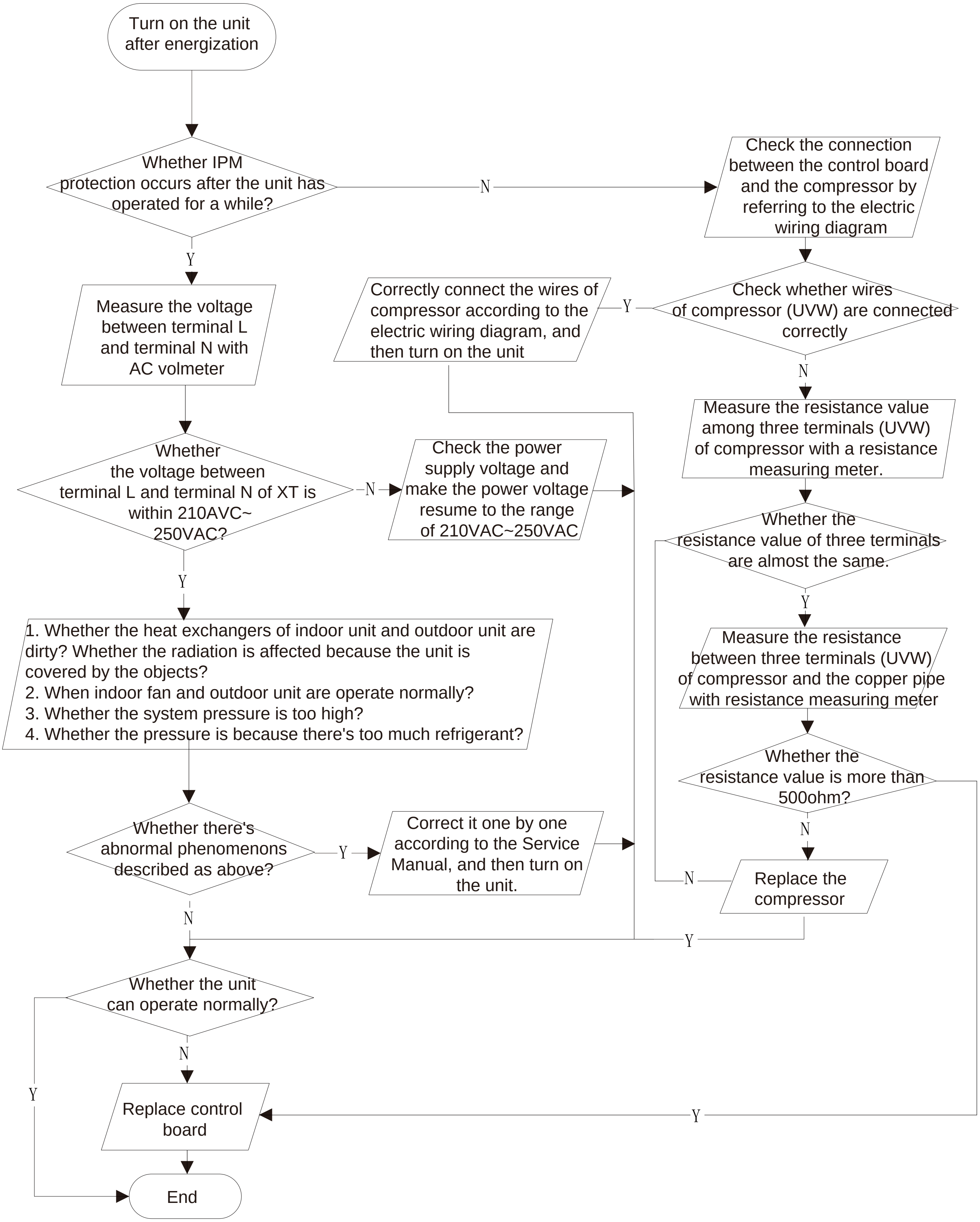

Turn on the unit and wait 1 minute
Use DC voltmeter to measure the voltage on the two ends of electrolytic capacitor
Voltage higher than 200V?
Y
Fault with the voltage testing circuit on control panel AP1
Replace the control panel AP1
N
Measure the AC voltage between terminalL andN on wiring board XT(power supply)
Voltage within 210VAC~250VAC?
N
Shut down the power and repair the power supply to restore the range 210VAC~250VAC
power on and restart the unit
If the fault is eliminated?
Y
Y
Shut down the power and wait 20 minutes;or use DC voltmeter to measure the voltage on the two ends of capacitor , until the voltage is lower than 20V
N
Check the connection of reactor (L in the Electrical Wiring Diagram)
If the wiring of reactor Lis normal?
N
Connect the reactor Laccording to Electrical Wiring Diagram correctly
Re-energize and turn on the unit
If the fault is eliminated?
Y
Y
Replace the control panel AP1
N
End

(2) IPM protection, phase current overcurrent (the control board as below indicates the control board of outdoor unit) H5/P5

Mainly detect:

(1) Compressor COMP terminal (2) voltage of power supply (3) compressor
(4) Refrigerant-charging volume (5) air outlet and air inlet of outdoor/indoor unit

Troubleshooting:

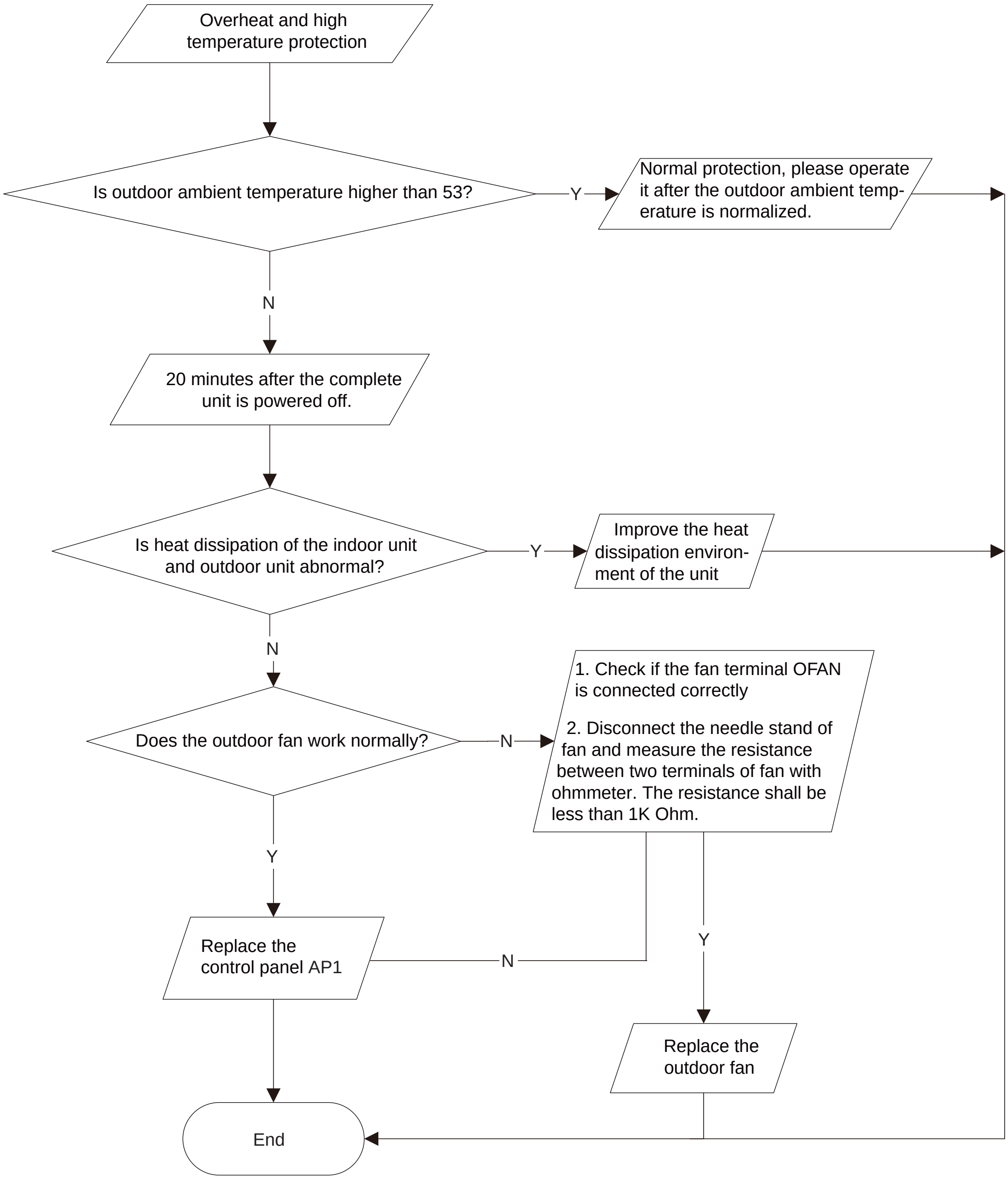

Turn on the unit after energization
Whether IPM protection occurs after the unit has operated for a while?
N
Check the connection between the control board and the compressor by referring to the electric wiring diagram
Y
Measure the voltage between terminal L and terminal N with AC volmeter
Correctly connect the wires of compressor according to the electric wiring diagram, and then turn on the unit
Y
Check whether wires of compressor (UVW) are connected correctly
N
Measure the resistance value among three terminals (UVW) of compressor with a resistance measuring meter.
Whether the voltage between terminal L and terminal N of XT is within 210AVC~ 250VAC?
N
Check the power supply voltage and make the power voltage resume to the range of 210VAC~250VAC
Whether the resistance value of three terminals are almost the same.
Y
Y
1. Whether the heat exchangers of indoor unit and outdoor unit are dirty? Whether the radiation is affected because the unit is covered by the objects?
2. When indoor fan and outdoor unit are operate normally?
3. Whether the system pressure is too high?
4. Whether the pressure is because there's too much refrigerant?
Measure the resistance between three terminals (UVW) of compressor and the copper pipe with resistance measuring meter
Whether the resistance value is more than 500ohm?
N
Whether there's abnormal phenomenons described as above?
Y
Correct it one by one according to the Service Manual, and then turn on the unit.
N
Replace the compressor
N
Y
Whether the unit can operate normally?
N
Y
Replace control board
Y
End

(3)High temperature and overload protection diagnosis (AP1 hereinafter refers to the control board of the outdoor unit)

Mainly detect:

- Is outdoor ambient temperature in normal range?
- Are the outdoor and indoor fans operating normally?
- Is the heat dissipation environment inside and outside the unit is good?

Fault diagnosis process:

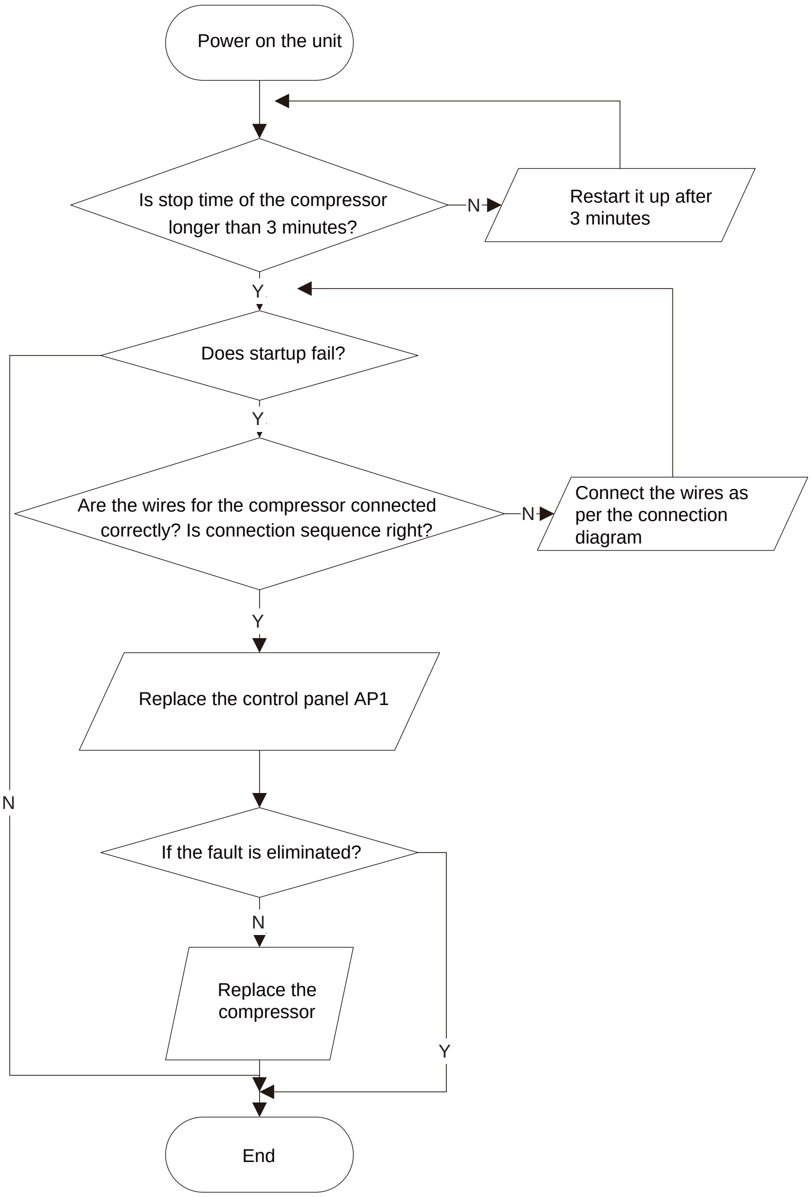

Overheat and high temperature protection
Is outdoor ambient temperature higher than 53?
Y
Normal protection, please operate it after the outdoor ambient temperature is normalized.
N
20 minutes after the complete unit is powered off.
Is heat dissipation of the indoor unit and outdoor unit abnormal?
Y
Improve the heat dissipation environment of the unit
N
Does the outdoor fan work normally?
N
1. Check if the fan terminal OFAN is connected correctly
2. Disconnect the needle stand of fan and measure the resistance between two terminals of fan with ohmmeter. The resistance shall be less than 1K Ohm.
Y
Replace the control panel AP1
N
Y
Replace the outdoor fan
End

(4) Start-up failure (following AP1 for outdoor unit control board)

Mainly detect:

- Whether the compressor wiring is connected correct?
- Is compressor broken?
- Is time for compressor stopping enough?

Fault diagnosis process:

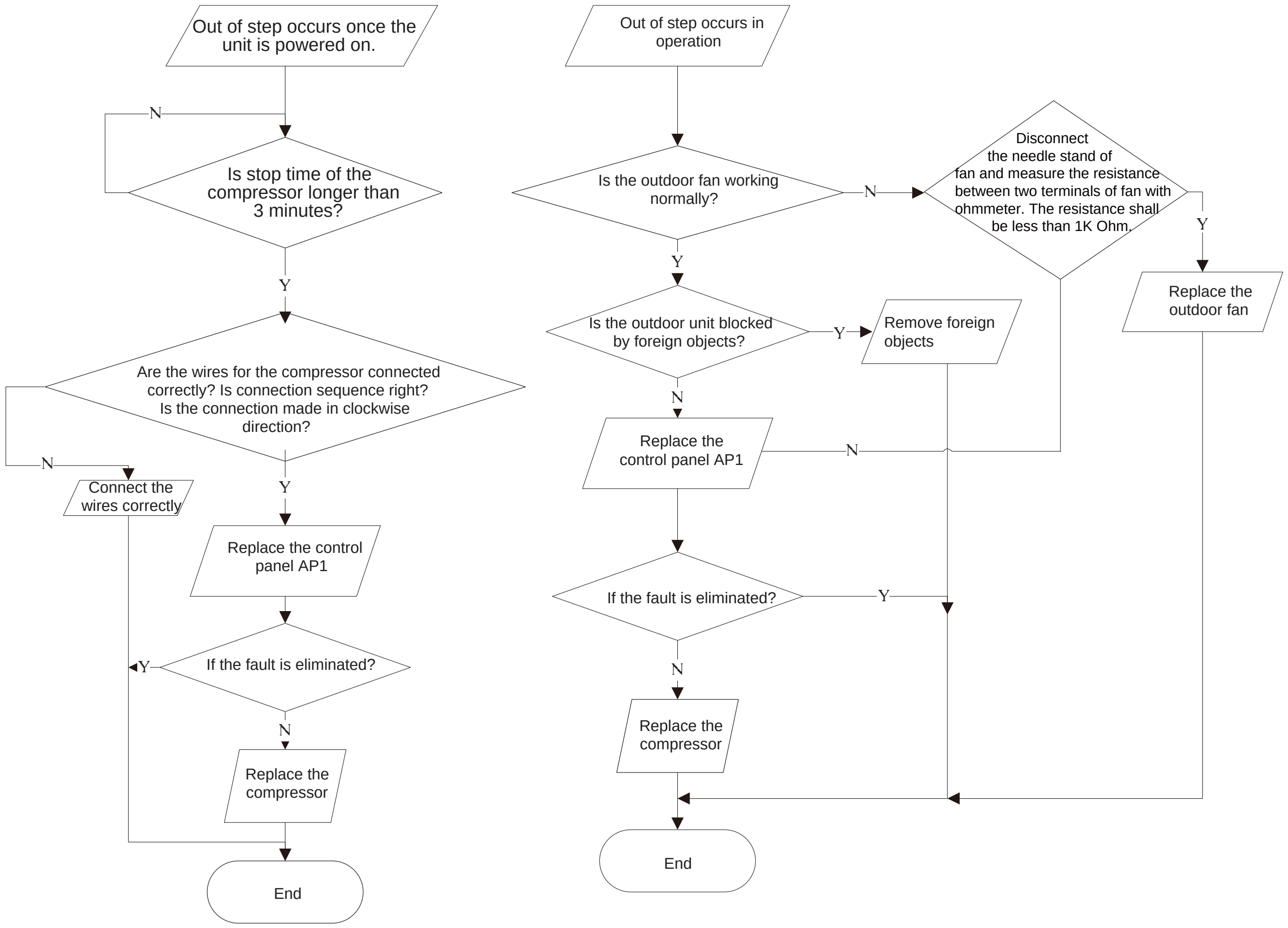

Power on the unit
Is stop time of the compressor longer than 3 minutes?
N
Restart it up after 3 minutes
Y
Does startup fail?
Y
Are the wires for the compressor connected correctly? Is connection sequence right?
N
Connect the wires as per the connection diagram
Y
Replace the control panel AP1
N
If the fault is eliminated?
N
Replace the compressor
Y
End

(5) Out of step diagnosis for the compressor (AP1 hereinafter refers to the control board of the outdoor unit)

Mainly detect:

- Whether the system pressure is too high?
- Whether the input voltage is too low?

Fault diagnosis process:


Out of step occurs once the unit is powered on.
N
Is stop time of the compressor longer than 3 minutes?
Y
Are the wires for the compressor connected correctly? Is connection sequence right? Is the connection made in clockwise direction?
N
Connect the wires correctly
Y
Replace the control panel AP1
If the fault is eliminated?
Y
N
Replace the compressor
End
Out of step occurs in operation
Is the outdoor fan working normally?
N
Disconnect the needle stand of fan and measure the resistance between two terminals of fan with ohmmeter. The resistance shall be less than 1K Ohm.
Y
Replace the outdoor fan
Y
Is the outdoor unit blocked by foreign objects?
Y
Remove foreign objects
N
Replace the control panel AP1
N
If the fault is eliminated?
Y
N
Replace the compressor
End

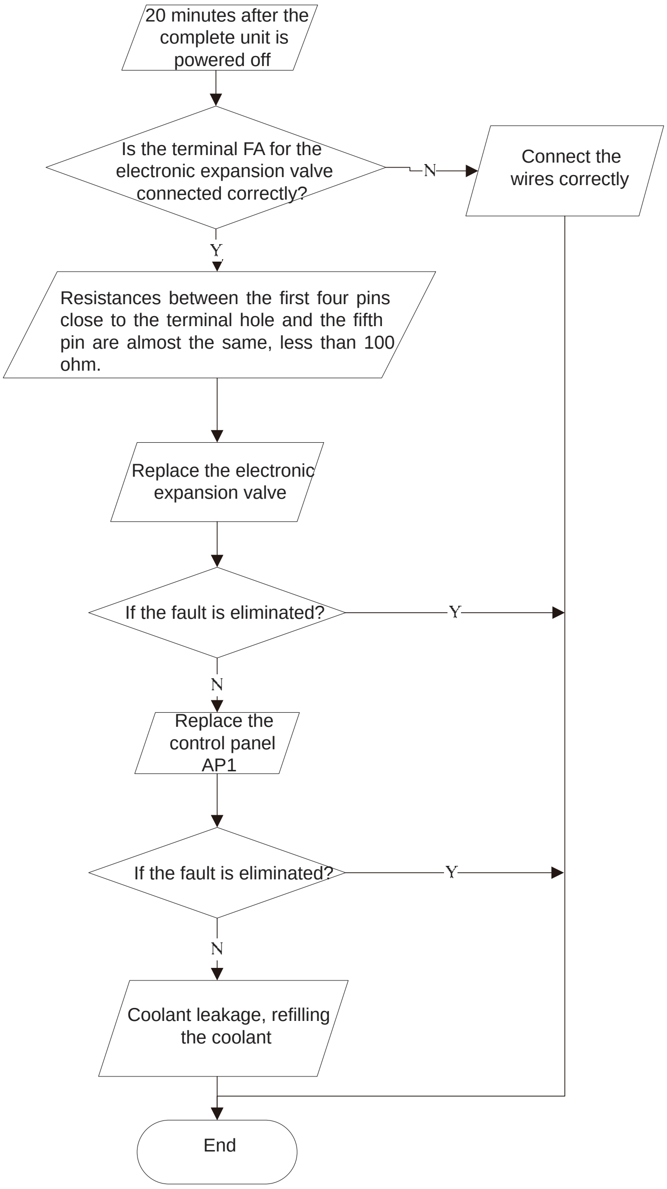
(6)Overload and air exhaust malfunction diagnosis (following AP1 for outdoor unit control board)

Mainly detect:

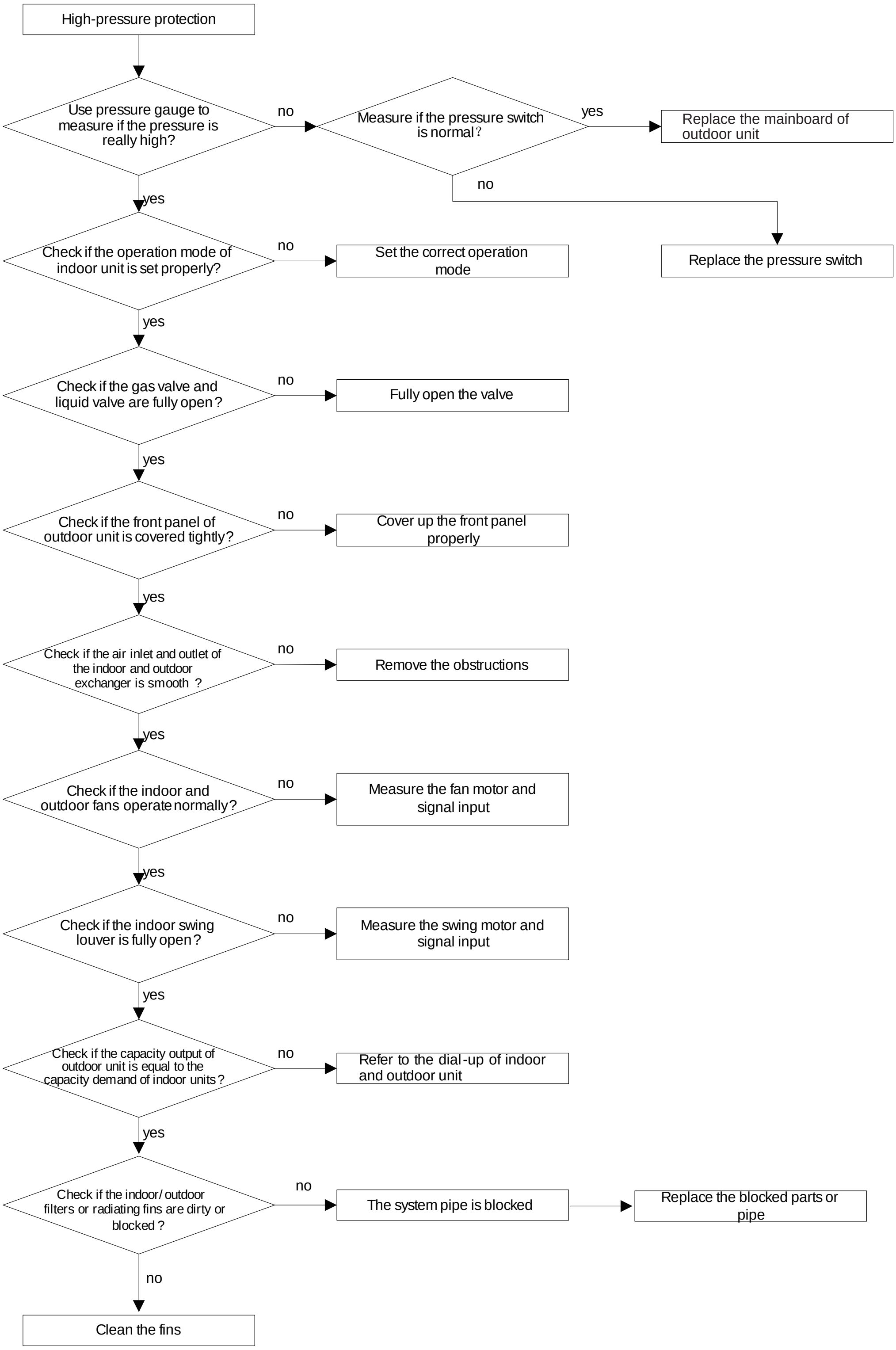
● Wether the PMV is connected well or not? Is PMV damaged?

● Is refrigerant leaked?

Fault diagnosis process:


20 minutes after the complete unit is powered off
Is the terminal FA for the electronic expansion valve connected correctly?
N
Connect the wires correctly
Y
Resistances between the first four pins close to the terminal hole and the fifth pin are almost the same, less than 100 ohm.
Replace the electronic expansion valve
If the fault is eliminated?
Y
N
Replace the control panel AP1
If the fault is eliminated?
Y
N
Coolant leakage, refilling the coolant
End

(7) High-pressure Protection


High-pressure protection
Use pressure gauge to measure if the pressure is really high?
no
Measure if the pressure switch is normal?
yes
Replace the mainboard of outdoor unit
no
Replace the pressure switch
yes
Check if the operation mode of indoor unit is set properly?
no
Set the correct operation mode
yes
Check if the gas valve and liquid valve are fully open?
no
Fully open the valve
yes
Check if the front panel of outdoor unit is covered tightly?
no
Cover up the front panel properly
yes
Check if the air inlet and outlet of the indoor and outdoor exchanger is smooth ?
no
Remove the obstructions
yes
Check if the indoor and outdoor fans operate normally?
no
Measure the fan motor and signal input
yes
Check if the indoor swing louver is fully open?
no
Measure the swing motor and signal input
yes
Check if the capacity output of outdoor unit is equal to the capacity demand of indoor units?
no
Refer to the dial-up of indoor and outdoor unit
yes
Check if the indoor/outdoor filters or radiating fins are dirty or blocked?
no
The system pipe is blocked
Replace the blocked parts or pipe
no
Clean the fins

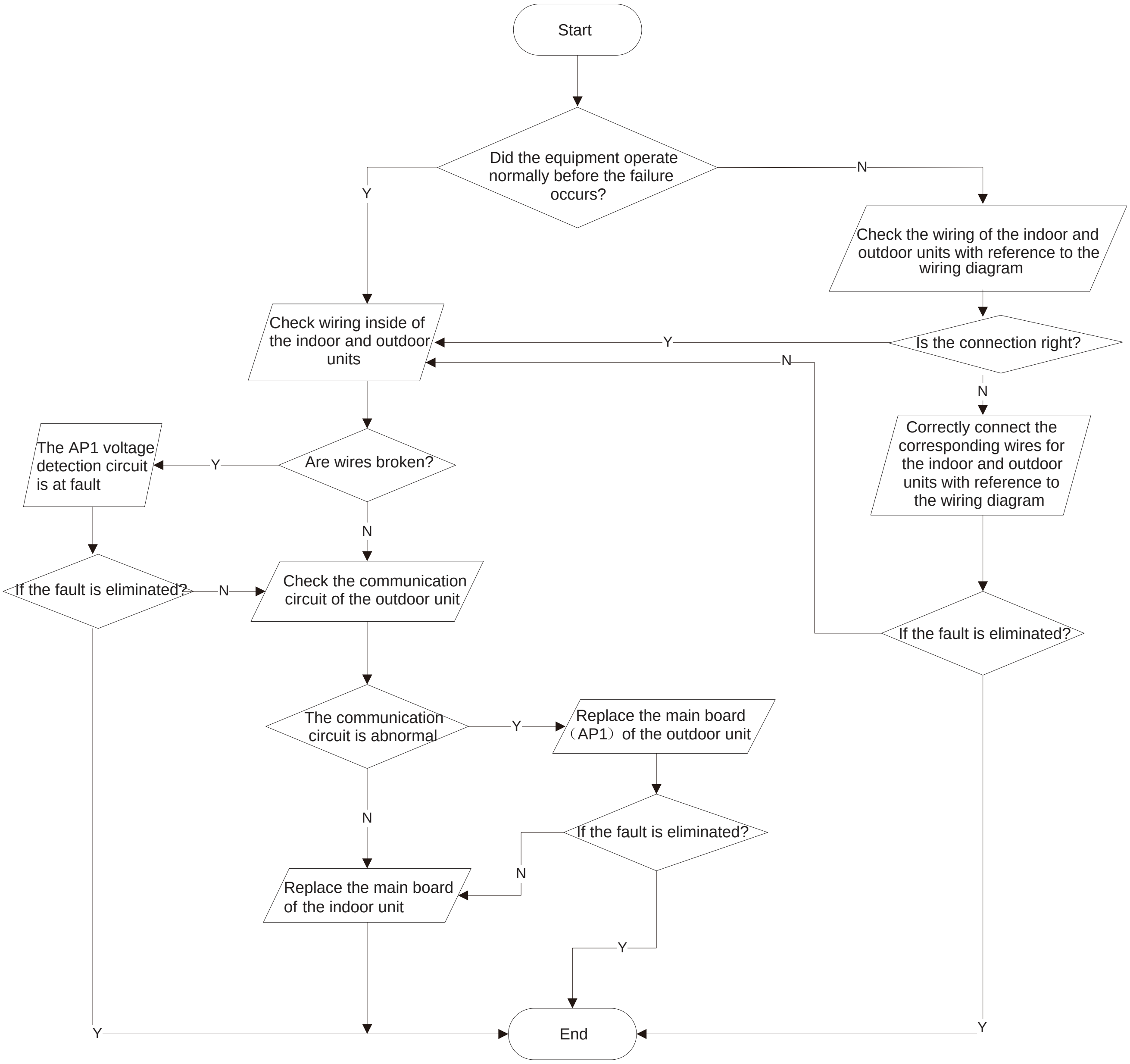
(8) Communication malfunction: (following AP1 for outdoor unit control board)

Mainly detect:

● Is there any damage for the indoor unit mainboard communication circuit? Is communication circuit damaged?

● Detect the indoor and outdoor units connection wire and indoor and outdoor units inside wiring is connect well or not, if is there any damage?

Fault diagnosis process:


Start
Did the equipment operate normally before the failure occurs?
Y
N
Check the wiring of the indoor and outdoor units with reference to the wiring diagram
Is the connection right?
Y
N
Check wiring inside of the indoor and outdoor units
Correctly connect the corresponding wires for the indoor and outdoor units with reference to the wiring diagram
Are wires broken?
Y
The AP1 voltage detection circuit is at fault
N
If the fault is eliminated?
N
Check the communication circuit of the outdoor unit
If the fault is eliminated?
N
The communication circuit is abnormal
Y
Replace the main board (AP1) of the outdoor unit
N
If the fault is eliminated?
N
Replace the main board of the indoor unit
Y
Y
End
Y

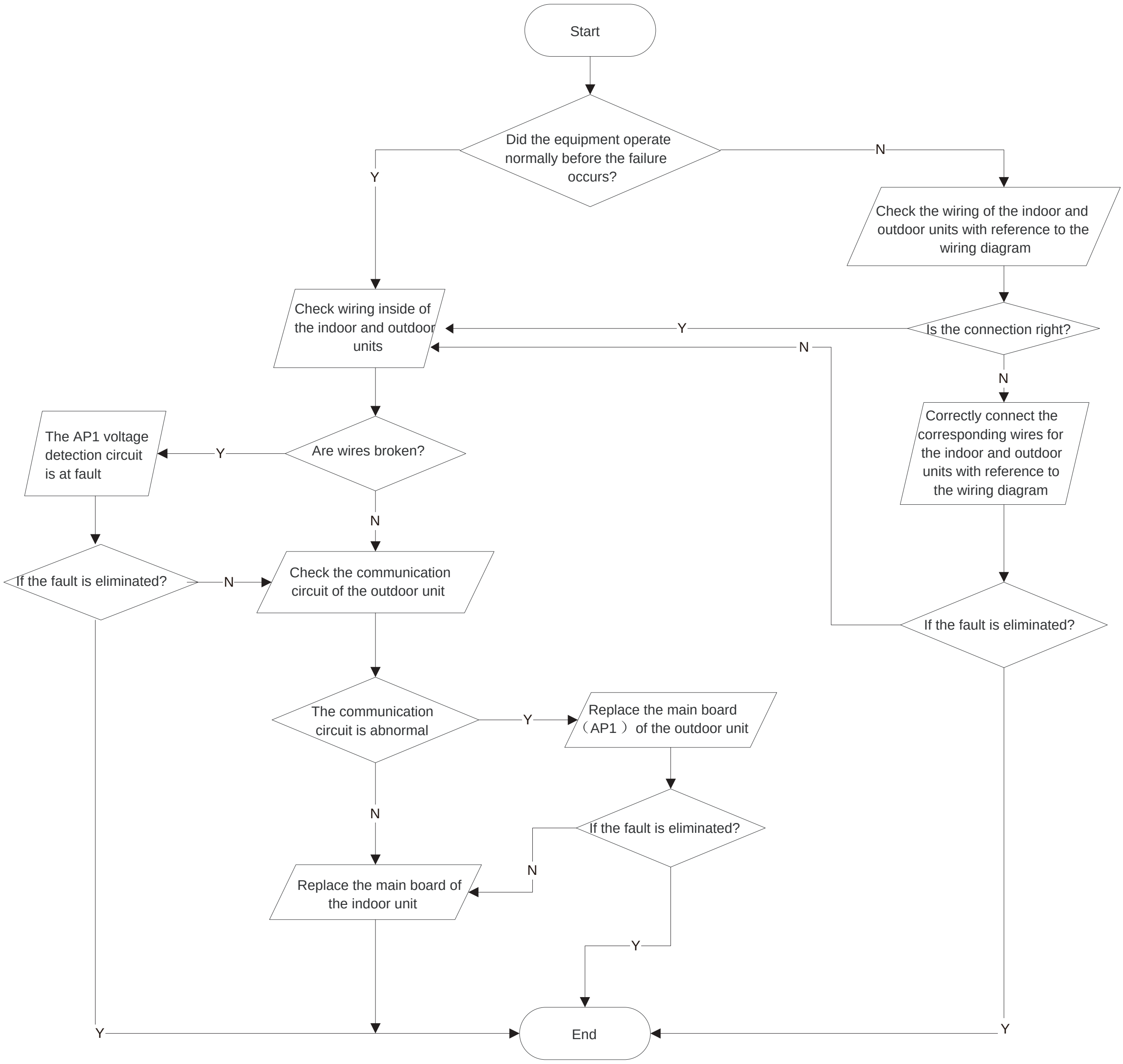
(9) Communication malfunction:(following AP1 for outdoor unit control board)

Mainly detect:

Detect the indoor and outdoor units connection wire and indoor and outdoor units inside wiring is connect well or not, If is there any damage?

Is there any damage for the indoor unit mainboard communication circuit? Is communication circuit damaged?

The flow chart fir malfunction detect:


Start
Did the equipment operate normally before the failure occurs?
Y
N
Check the wiring of the indoor and outdoor units with reference to the wiring diagram
Is the connection right?
Y
N
Check wiring inside of the indoor and outdoor units
Correctly connect the corresponding wires for the indoor and outdoor units with reference to the wiring diagram
Are wires broken?
Y
N
The AP1 voltage detection circuit is at fault
If the fault is eliminated?
N
Check the communication circuit of the outdoor unit
If the fault is eliminated?
The communication circuit is abnormal
Y
Replace the main board（AP1 ）of the outdoor unit
N
If the fault is eliminated?
N
Replace the main board of the indoor unit
Y
Y
End
Y

9.3 Troubleshooting for Normal Malfunction

1. Air Conditioner Cant be Started Up

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
No power supply, or poor connection for power plug	After energization, operation indicator isnt bright and the buzzer cant give out sound	Confirm whether its due to power failure. If yes, wait for power recovery. If not, check power supply circuit and make sure the power plug is connected well.
Wrong wire connection between indoor unit and outdoor unit, or poor connection for wiring terminals	Under normal power supply circumstances, operation indicator isnt bright after energization	Check the circuit according to circuit diagram and connect wires correctly. Make sure all wiring terminals are connected firmly
Electric leakage for air conditioner	After energization, room circuit breaker trips off at once	Make sure the air conditioner is grounded reliably Make sure wires of air conditioner is connected correctly Check the wiring inside air conditioner. Check whether the insulation layer of power cord is damaged; if yes, place the power cord.
Model selection for air switch is improper	After energization, air switch trips off	Select proper air switch
Malfunction of remote controller	After energization, operation indicator is bright, while no display on remote controller or buttons have no action.	Replace batteries for remote controller Repair or replace remote controller

2. Poor Cooling (heating) for Air Conditioner

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Set temperature is improper	Observe the set temperature on remote controller	Adjust the set temperature
Rotation speed of the IDU fan motor is set too low	Small wind blow	Set the fan speed at high or medium
Filter of indoor unit is blocked	Check the filter to see its blocked	Clean the filter
Installation position for indoor unit and outdoor unit is improper	Check whether the installation postion is proper according to installation requirement for air conditioner	Adjust the installation position, and install the rainproof and sunproof for outdoor unit
Refrigerant is leaking	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Units pressure is much lower than regulated range	Find out the leakage causes and deal with it. Add refrigerant.
Malfunction of 4-way valve	Blow cold wind during heating	Replace the 4-way valve
Malfunction of capillary	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unitt pressure is much lower than regulated range. If refrigerant isnt leaking, part of capillary is blocked	Replace the capillary
Flow volume of valve is insufficient	The pressure of valves is much lower than that stated in the specification	Open the valve completely
Malfunction of horizontal louver	Horizontal louver cant swing	Refer to point 3 of maintenance method for details
Malfunction of the IDU fan motor	The IDU fan motor cant operate	Refer to troubleshooting for H6 for maintenance method in details
Malfunction of the ODU fan motor	The ODU fan motor cant operate	Refer to point 4 of maintenance method for details
Malfunction of compressor	Compressor cant operate	Refer to point 5 of maintenance method for details

3. Horizontal Louver Cant Swing

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Stepping motor is damaged	Stepping motor cant operate	Repair or replace stepping motor
Main board is damaged	Others are all normal, while horizontal louver cant operate	Replace the main board with the same model

4. ODU Fan Motor Cant Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of the ODU fan motor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the capacity of fan
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Motor of outdoor unit is damaged	When unit is on, cooling/heating performance is bad and ODU compressor generates a lot of noise and heat.	Change compressor oil and refrigerant. If no better, replace the compressor with a new one

5. Compressor Cant Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of compressor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the compressor capacitor
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Coil of compressor is burnt out	Use universal meter to measure the resistance between compressor terminals and its 0	Repair or replace compressor
Cylinder of compressor is blocked	Compressor cant operate	Repair or replace compressor

6. Air Conditioner is Leaking

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Drain pipe is blocked	Water leaking from indoor unit	Eliminate the foreign objects inside the drain pipe
Drain pipe is broken	Water leaking from drain pipe	Replace drain pipe
Wrapping is not tight	Water leaking from the pipe connection place of indoor unit	Wrap it again and bundle it tightly

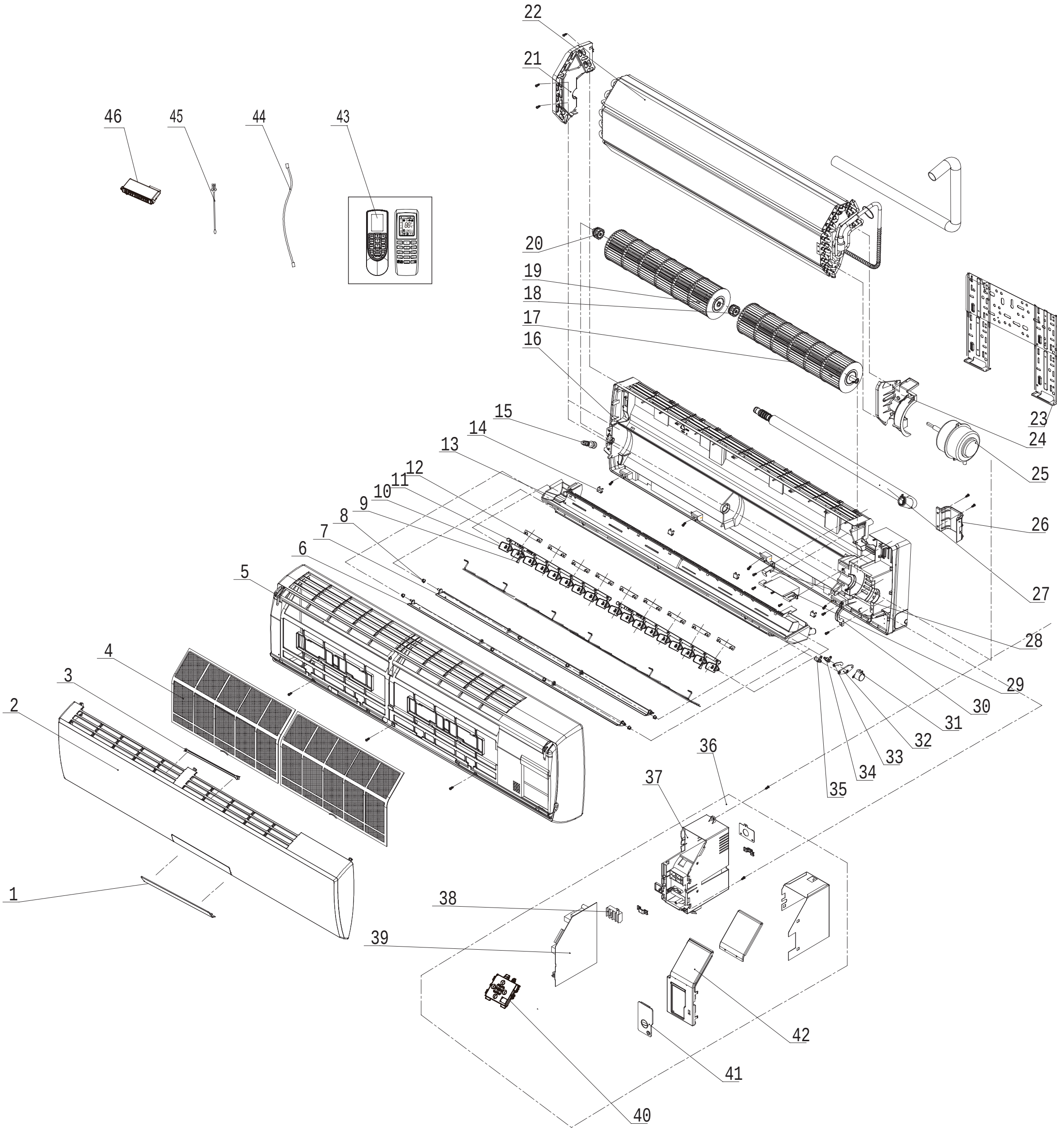
7. Abnormal Sound and Vibration

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
When turn on or turn off the unit, the panel and other parts will expand and theres abnormal sound	Theres the sound of "PAPA"	Normal phenomenon. Abnormal sound will disappear after a few minutes.
When turn on or turn off the unit, theres abnormal sound due to flow of refrigerant inside air conditioner	Water-running sound can be heard	Normal phenomenon. Abnormal sound will disappear after a few minutes.
Foreign objects inside the indoor unit or therere parts touching together inside the indoor unit	Theres abnormal sound fro indoor unit	Remove foreign objects. Adjust all parts position of indoor unit, tighten screws and stick damping plaster between connected parts
Foreign objects inside the outdoor unit or therere parts touching together inside the outdoor unit	Theres abnormal sound fro outdoor unit	Remove foreign objects. Adjust all parts position of outdoor unit, tighten screws and stick damping plaster between connected parts
Short circuit inside the magnetic coil	During heating, the way valve has abnormal electromagnetic sound	Replace magnetic coil
Abnormal shake of compressor	Outdoor unit gives out abnormal sound	Adjust the support foot mat of compressor, tighten the bolts
Abnormal sound inside the compressor	Abnormal sound inside the compressor	If add too much refrigerant during maintenance, please reduce refrigerant properly. Replace compressor for other circumstances.

10. Exploded View and Parts List

10.1 Indoor Unit

For some models: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The component picture is only for reference; please refer to the actual product.

NO.	Description	Part Code		Qty
		GWC30LB-D3DNB2G/I	GWH30LB-D3DNB2G/I	
	Product Code	CB433N00102	CB433N00202	
1	Receiver Window	/	/	/
2	Front Panel	20000300022S	20000300022S	1
3	Stand bar	2421212001	2421212001	1
4	Filter Sub-Assy	11122106	11122106	2
5	Front Case Sub-Assy	20900700005	20900700005	1
6	Upper Guide Louver	1051216601	1051216601	1
7	Lower guide louver	1051216701	1051216701	1
8	Axile Bush	10542704	10542704	6
9	Air Louver 2	1051216902	1051216902	2
10	Air Louver 1	1051216802	1051216802	16
11	Connecting Rod	10582086	10582086	2
12	Louver Clamp	26112158	26112158	9
13	Water Tray	2018213802	2018213802	1
14	Screw Cover	2425200506	2425200506	4
15	Rubber Plug (Water Tray)	76712012	76712012	1
16	Rear Case Sub-Assy	00000100113	00000100113	1
17	Cross Flow Fan 1	10352039	10352039	1
18	Bearing Holder sub-assy	26152028	26152028	1
19	Cross Flow Fan 2	10352040	10352040	1
20	O-Gasket sub-assy of Bearing	76512051	76512051	1
21	Left Evaporator Support	24212041	24212041	1
22	Evaporator Assy	01002000027	01002000027	1
23	Wall Mounting Frame	01252398	01252398	1
24	Right Support of Evaporator	2421204201	2421204201	1
25	Fan Motor	1501213401	1501213401	1
26	Pipe Clamp	26112071	26112071	1
27	Drainage hose	0523001404	0523001404	1
28	Fixed Clip (Evaporator)	02112009	02112009	1
29	Cover Plate	2012212402	2012212402	1
30	Motor Fixed Clip	26112324	26112324	1
31	Step Motor	1521210701	1521210701	1
32	Press plate (crank)	26112070	26112070	1
33	Crank-guide	10582041	10582041	1
34	Upper Crank	10562004	10562004	1
35	Lower crank	10562005	10562005	1
36	Electric Box Assy	10000203983	10000204113	1
37	Electric Box	201022502	201022502	1
38	Terminal Board	42011233	42011233	1
39	Main Board	30138001022	30138001017	1
40	Display Board	30565277	30565277	1
41	Electric Box Cover	2011204404S	2011204404S	1
42	Electric Box Cover	201022523	201022523	1
43	Remote Controller	305001000085	305001000085	1
44	Tube Sensor	390000592	390000592	1
45	Ambient Temperature Sensor	390000453	390000453	1
46	Detecting plate(WIFI)	30070077	30070077	1

Above data is subject to change without notice.

NO.	Description	Part Code		Qty
		GWC36LB-D3DNB2G/I	GWH36LB-D3DNB2G/I	
	Product Code	CB433N00302	CB433N00402	
1	Receiver Window	/	/	/
2	Front Panel	20000300022S	20000300022S	1
3	Stand bar	2421212001	2421212001	1
4	Filter Sub-Assy	11122106	11122106	2
5	Front Case Sub-Assy	20900700005	20900700005	1
6	Upper Guide Louver	1051216601	1051216601	1
7	Lower guide louver	1051216701	1051216701	1
8	Axile Bush	10542704	10542704	6
9	Air Louver 2	1051216902	1051216902	2
10	Air Louver 1	1051216802	1051216802	16
11	Connecting Rod	10582086	10582086	2
12	Louver Clamp	26112158	26112158	9
13	Water Tray	2018213802	2018213802	1
14	Screw Cover	2425200506	2425200506	4
15	Rubber Plug (Water Tray)	76712012	76712012	1
16	Rear Case Sub-Assy	00000100113	00000100113	1
17	Cross Flow Fan 1	10352039	10352039	1
18	Bearing Holder sub-assy	26152028	26152028	1
19	Cross Flow Fan 2	10352040	10352040	1
20	O-Gasket sub-assy of Bearing	76512051	76512051	1
21	Left Evaporator Support	24212041	24212041	1
22	Evaporator Assy	01002000027	01002000027	1
23	Wall Mounting Frame	01252398	01252398	1
24	Right Support of Evaporator	2421204201	2421204201	1
25	Fan Motor	1501213401	1501213401	1
26	Pipe Clamp	26112071	26112071	1
27	Drainage hose	0523001404	0523001404	1
28	Fixed Clip (Evaporator)	02112009	02112009	1
29	Cover Plate	2012212402	2012212402	1
30	Motor Fixed Clip	26112324	26112324	1
31	Step Motor	1521210701	1521210701	1
32	Press plate (crank)	26112070	26112070	1
33	Crank-guide	10582041	10582041	1
34	Upper Crank	10562004	10562004	1
35	Lower crank	10562005	10562005	1
36	Electric Box Assy	10000203979	10000204114	1
37	Electric Box	201022502	201022502	1
38	Terminal Board	42011233	42011233	1
39	Main Board	30138001022	30138001017	1
40	Display Board	30565277	30565277	1
41	Electric Box Cover	201022523	201022523	1
42	Electric Box Cover	2011204404S	2011204404S	1
43	Remote Controller	305001000085	305001000085	1
44	Tube Sensor	390000592	390000592	1
45	Ambient Temperature Sensor	390000453	390000453	1
46	Detecting plate(WIFI)	30070077	30070077	1

Above data is subject to change without notice.

NO.	Description	Part Code		Qty
		GWH36LB-D3DNA5G/I	GWH36QF-D3DNB4G/I	
	Product Code	CB169N01002	CB434N04901	
1	Receiver Window	/	/	/
2	Front Panel	20012661	CB434N04901	1
3	Stand bar	24212120	24212120	1
4	Filter Sub-Assy	11122106	11122106	2
5	Front Case Sub-Assy	20022159	20900700005	1
6	Upper Guide Louver	10512166	1051216601	1
7	Lower guide louver	10512167	1051216701	1
8	Axile Bush	10542704	10542704	6
9	Air Louver 2	10512169	1051216902	2
10	Air Louver 1	10512168	1051216802	16
11	Connecting Rod	10582086	10582086	2
12	Louver Clamp	26112158	26112158	9
13	Water Tray	20182138	2018213802	1
14	Screw Cover	242520053	2425200506	4
15	Rubber Plug (Water Tray)	76712012	76712012	1
16	Rear Case Sub-Assy	22202928	22202928	1
17	Cross Flow Fan 1	10352039	10352039	1
18	Bearing Holder sub-assy	26152028	26152028	1
19	Cross Flow Fan 2	10352040	10352040	1
20	O-Gasket sub-assy of Bearing	76512051	76512051	1
21	Left Evaporator Support	24212041	24212041	1
22	Evaporator Assy	01002000027	01002000027	1
23	Wall Mounting Frame	01252398	01252398	1
24	Right Support of Evaporator	2421204201	2421204201	1
25	Fan Motor	1501213401	1501213401	1
26	Pipe Clamp	26112071	26112071	1
27	Drainage hose	0523001404	0523001404	1
28	Fixed Clip (Evaporator)	02112009	02112009	1
29	Cover Plate	20122124	2012212402	1
30	Motor Fixed Clip	26112324	26112324	1
31	Step Motor	1521210701	1521210701	1
32	Press plate (crank)	26112070	26112070	1
33	Crank-guide	10582041	10582041	1
34	Upper Crank	10562004	10562004	1
35	Lower crank	10562005	10562005	1
36	Electric Box Assy	10000204522	10000204114	1
37	Electric Box	201022502	201022502	1
38	Terminal Board	42011233	42011233	1
39	Main Board	30138001017	30138001017	1
40	Display Board	30565124	30565277	1
41	Electric Box Cover	201022523	201022523	1
42	Electric Box Cover	2011204404S	2011204404S	1
43	Remote Controller	305001000092	305001000085	1
44	Tube Sensor	390000592	390000453	1
45	Ambient Temperature Sensor	390000453	390000592	1
46	Detecting plate(WIFI)	30070077	30070079	1

Above data is subject to change without notice.

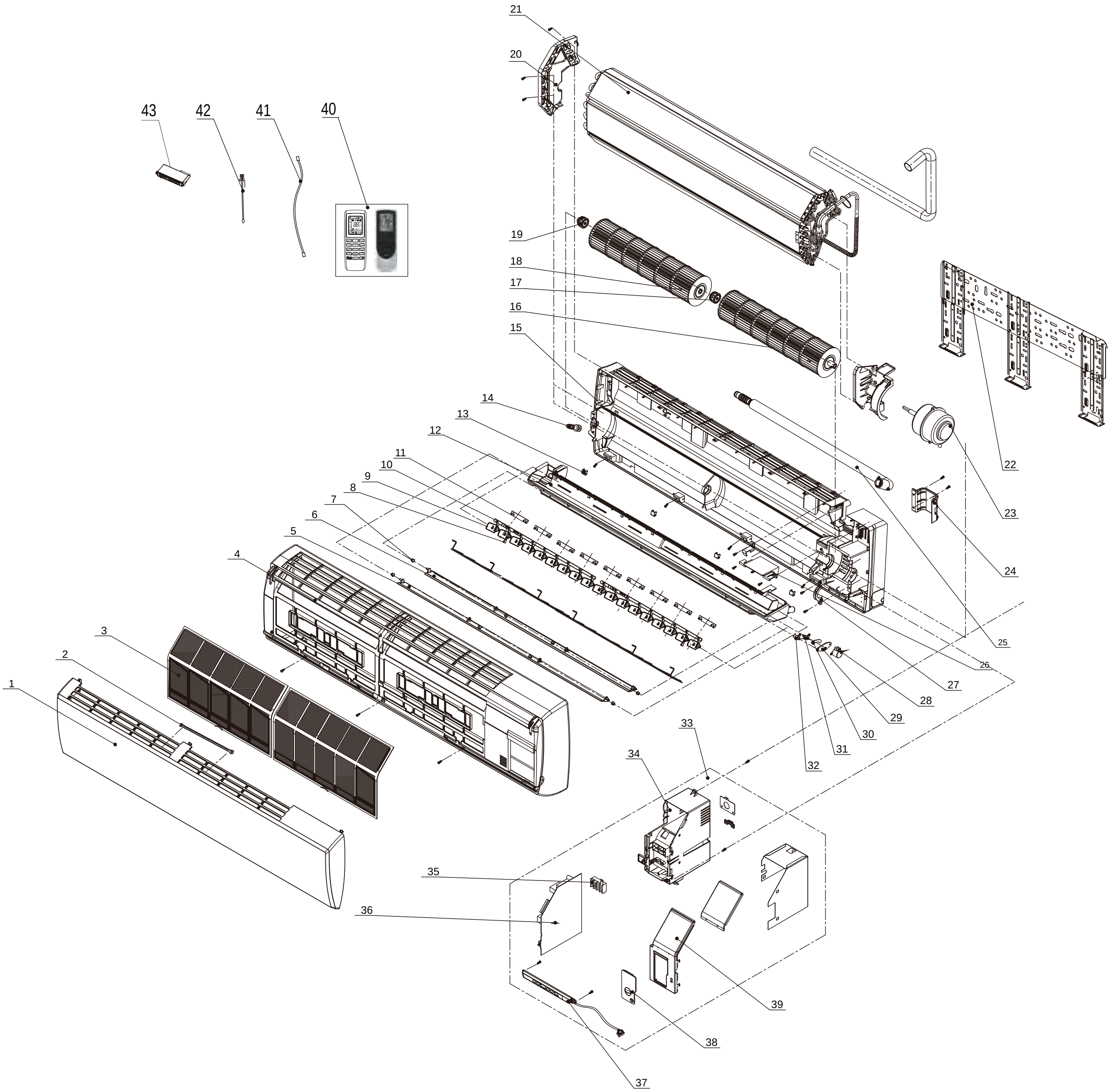
NO.	Description	Part Code		Qty
		GWC30QF-D3DNB4G/I	GWC36QF-D3DNB4G/I	
	Product Code	CB434N05001	CB434N05102	
1	Receiver Window	/	/	/
2	Front Panel	200003000035	200003000035	1
3	Stand bar	2421212001	2421212001	1
4	Filter Sub-Assy	1112210602	1112210602	2
5	Front Case Sub-Assy	20900700005	20900700005	1
6	Upper Guide Louver	1051216601	1051216601	1
7	Lower guide louver	1051216701	1051216701	1
8	Axile Bush	10542704	10542704	6
9	Air Louver 2	1051216902	1051216902	2
10	Air Louver 1	1051216802	1051216802	16
11	Connecting Rod	10582086	10582086	2
12	Louver Clamp	26112158	26112158	9
13	Water Tray	2018213802	2018213802	1
14	Screw Cover	2425200506	2425200506	4
15	Rubber Plug (Water Tray)	76712012	76712012	1
16	Rear Case Sub-Assy	00000100113	00000100113	1
17	Cross Flow Fan 1	10352039	10352039	1
18	Bearing Holder sub-assy	26152028	26152028	1
19	Cross Flow Fan 2	10352040	10352040	1
20	O-Gasket sub-assy of Bearing	76512051	76512051	1
21	Left Evaporator Support	24212041	24212041	1
22	Evaporator Assy	01002000027	01002000027	1
23	Wall Mounting Frame	01252398	01252398	1
24	Right Support of Evaporator	2421204201	2421204201	1
25	Fan Motor	1501213401	1501213401	1
26	Pipe Clamp	26112071	26112071	1
27	Drainage hose	0523001404	0523001404	1
28	Fixed Clip (Evaporator)	02112009	02112009	1
29	Cover Plate	2012212402	2012212402	1
30	Motor Fixed Clip	26112324	26112324	1
31	Step Motor	1521210701	1521210701	1
32	Press plate (crank)	26112070	26112070	1
33	Crank-guide	10582041	10582041	1
34	Upper Crank	10562004	10562004	1
35	Lower crank	10562005	10562005	1
36	Electric Box Assy	10000203983	10000203979	1
37	Electric Box	201022502	201022502	1
38	Terminal Board	42011233	42011233	1
39	Main Board	30138001022	30138001022	1
40	Display Board	30565277	30565277	1
41	Electric Box Cover	201022523	201022523	1
42	Electric Box Cover	2011204404S	2011204404S	1
43	Remote Controller	305001000085	305001000085	1
44	Tube Sensor	390000453	390000453	1
45	Ambient Temperature Sensor	390000592	390000592	1
46	Detecting plate(WIFI)	30070077	30070077	1

Above data is subject to change without notice.

NO.	Description	Part Code		Qty
		GWH30QF-D3DNB4G/I	GWH36LB-D3DNA4G/I	
	Product Code	CB434N04801	CB471N00101	
1	Receiver Window	/	/	/
2	Front Panel	200003000035T	200003000079	1
3	Stand bar	2421212001	2421212001	1
4	Filter Sub-Assy	11122106	1112210602	2
5	Front Case Sub-Assy	20900700005	20900700005	1
6	Upper Guide Louver	1051216601	1051216601	1
7	Lower guide louver	1051216701	1051216701	1
8	Axile Bush	10542704	10542704	6
9	Air Louver 2	1051216902	1051216902	2
10	Air Louver 1	1051216802	1051216802	16
11	Connecting Rod	10582086	10582086	2
12	Louver Clamp	26112158	26112158	9
13	Water Tray	2018213802	2018213802	1
14	Screw Cover	2425200506	2425200506	4
15	Rubber Plug (Water Tray)	76712012	76712012	1
16	Rear Case Sub-Assy	00000100113	00000100113	1
17	Cross Flow Fan 1	10352039	10352039	1
18	Bearing Holder sub-assy	26152028	26152028	1
19	Cross Flow Fan 2	10352040	10352040	1
20	O-Gasket sub-assy of Bearing	76512051	76512051	1
21	Left Evaporator Support	24212041	24212041	1
22	Evaporator Assy	01002000027	01002000027	1
23	Wall Mounting Frame	01252398	01252398	1
24	Right Support of Evaporator	2421204201	2421204201	1
25	Fan Motor	1501213401	1501213401	1
26	Pipe Clamp	26112071	26112071	1
27	Drainage hose	0523001404	0523001404	1
28	Fixed Clip (Evaporator)	02112009	02112009	1
29	Cover Plate	2012212402	2012212402	1
30	Motor Fixed Clip	26112324	26112324	1
31	Step Motor	1521210701	1521210701	1
32	Press plate (crank)	26112070	26112070	1
33	Crank-guide	10582041	10582041	1
34	Upper Crank	10562004	10562004	1
35	Lower crank	10562005	10562005	1
36	Electric Box Assy	10000204113	100002068442	1
37	Electric Box	201022502	2010225006	1
38	Terminal Board	42011233	42011233	1
39	Main Board	30138001017	30138001017	1
40	Display Board	30565277	300001000080	1
41	Electric Box Cover	201022523	2011204404	1
42	Electric Box Cover	2011204404S	2011204404S	1
43	Remote Controller	305001000085	305001000085	1
44	Tube Sensor	390000453	390000453	1
45	Ambient Temperature Sensor	390000592	390000592	1
46	Detecting plate(WIFI)	30070077	30070077	1

Above data is subject to change without notice.

GWH36QF-D3DNB2I/I GWH30QF-D3DNB2I/I GWH36QF-D3DNB2J/I GWH36QF-D3DNB4H/I GWH36LB-D3DNA3H/I
GWH36QF-D3DNB2H/I GWC30QF-D3DNB2K/I GWH30QF-D3DNB2K/I GWC36QF-D3DNB2O/I GWH36QF-D3DNB2O/I
GWH30QF-D3DNB4K/I GWH36QF-D3DNB4O/I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The component picture is only for reference; please refer to the actual product.

NO.	Description	Part Code			Qty
		GWH36QF-D3DNB2I/I	GWH30QF-D3DNB2I/I	GWH36QF-D3DNB4H/I	
	Product Code	CB432N10100	CB432N10000	CB434N14800	
1	Front Panel	20000300022S	20000300022S	200003000035T	1
2	Stand Bar	2421212001	2421212001	2421212001	1
3	Filter Sub-Assy	1112210601	1112210602	1112210602	2
4	Front Case Sub-assy	20900700005	20900700005	20900700005	1
5	Upper Guide Louver	1051216601	1051216601	1051216601	1
6	Lower Guide Louver	1051216701	1051216701	1051216701	1
7	Axile Bush	10542704	10542704	10542704	6
8	Air Louver 2	1051216902	1051216902	1051216902	2
9	Air Louver 1	1051216802	1051216802	1051216802	16
10	Connecting Rod	10582086	10582086	10582086	2
11	Louver Clamp	26112158	26112158	26112158	9
12	Water Tray	2018213802	2018213802	2018213802	1
13	Screw Cover	2425200506	2425200506	2425200506	4
14	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
15	Rear Case assy	00000100113	00000100113	00000100113	1
16	Cross Flow Fan 1	10352039	10352039	10352039	1
17	Bearing Holder Sub-assy	26152028	26152028	26152028	1
18	Cross Flow Fan 2	10352040	10352040	10352040	1
19	O-Gasket sub-assy of Bearing	76512051	76512051	76512051	1
20	Left Evaporator Support	24212041	24212041	24212041	1
21	Evaporator Assy	01100100014001	01100100014001	01002000027	1
22	Wall Mounting Frame	01252398	01252398	01252398	1
23	Fan Motor	1501213401	1501213401	1501213401	1
24	Pipe Clamp	26112071	26112071	26112071	1
25	Drainage Hose	0523001404	0523001404	0523001404	1
26	Cover Plate	2012212402	2012212402	2012212402	1
27	Motor Fixed Clip 1	26112324	26112324	26112324	1
28	SteppingMotor	1521210701	1521210701	1521210701	1
29	Press Plate(Crank)	26112070	26112070	26112070	1
30	Crank-guide	10582041	10582041	10582041	1
31	Upper Crank	10562004	10562004	10562004	1
32	Lower crank	10562005	10562005	10562005	1
33	Electric Box Assy	100002003292	100002003292	100002064434	1
34	Electric Box	201022502	201022502	201022502	1
35	Terminal Board	42011233	42011233	42011233	1
36	Main Board	30138001017	30138001017	30138001017	1
37	Display Board	30565277	30565277	30565277	1
38	Electric Box Cover	201022523	201022523	201022523	1
39	Electric Box Cover	2011204404S	2011204404S	2011204404S	1
40	Remote Controller	305001000085	305001000085	305001000085	1
41	Temperature Sensor	390000592	390000592	390000592	1
42	Temperature Sensor	390000453	390000453	390000453	1
43	Detecting plate(WIFI)	30070077	30070077	30070077	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH36QF-D3DNB2H/I	GWH36QF-D3DNB2J/I	GWH36LB-D3DNA3H/I	
	Product Code	CB432N08101	CB432N20300	CB171N14400	
1	Front Panel	20000300022S	20000300022S	20012490S	1
2	Stand Bar	2421212001	2421212001	24212120	1
3	Filter Sub-Assy	11122106	1112210602	1112210602	2
4	Front Case Sub-assy	20900700005	20900700005	20022159	1
5	Upper Guide Louver	1051216601	1051216601	10512166	1
6	Lower Guide Louver	1051216701	1051216701	10512167	1
7	Axile Bush	10542704	10542704	10542704	6
8	Air Louver 2	1051216902	1051216902	10512169	2
9	Air Louver 1	1051216802	1051216802	10512168	16
10	Connecting Rod	10582086	10582086	10582086	2
11	Louver Clamp	26112158	26112158	26112158	9
12	Water Tray	2018213802	2018213802	20182138	1
13	Screw Cover	2425200506	2425200506	242520053	4
14	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
15	Rear Case assy	00000100113	00000100113	22202928	1
16	Cross Flow Fan 1	10352039	10352039	10352039	1
17	Bearing Holder Sub-assy	26152028	26152028	26152028	1
18	Cross Flow Fan 2	10352040	10352040	10352040	1
19	O-Gasket sub-assy of Bearing	76512051	76512051	76512051	1
20	Left Evaporator Support	24212041	24212041	24212041	1
21	Evaporator Assy	1002000027	01002000027	01002000027	1
22	Wall Mounting Frame	1252398	01252398	01252398	1
23	Fan Motor	1501213401	1501213401	1501213401	1
24	Pipe Clamp	26112071	26112071	26112071	1
25	Drainage Hose	523001404	0523001404	0523001404	1
26	Cover Plate	2012212402	2012212402	20122124	1
27	Motor Fixed Clip 1	26112324	26112324	26112324	1
28	Stepping Motor	1521210701	1521210701	1521210701	1
29	Press Plate(Crank)	26112070	26112070	26112070	1
30	Crank-guide	10582041	10582041	10582041	1
31	Upper Crank	10562004	10562004	10562004	1
32	Lower crank	10562005	10562005	10562005	1
33	Electric Box Assy	100002001022	100002064434	100002065270	1
34	Electric Box	201022502	201022502	201022502	1
35	Terminal Board	42011233	42011233	42011233	1
36	Main Board	30138001017	30138001017	30138001017	1
37	Display Board	30565277	30565277	30565087	1
38	Electric Box Cover	2011204404S	2011204404S	2011204404S	1
39	Electric Box Cover	2011204404	2011204404	2011204404	1
40	Remote Controller	305001000085	305001000085	305001000085	1
41	Temperature Sensor	390000592	390000592	390000592	1
42	Temperature Sensor	390000453	390000453	390000453	1
43	Detecting plate(WIFI)	30070077	30070077	30070077	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWC30QF-D3DNB2K/I	GWH30QF-D3DNB2K/I	GWH30QF-D3DNB4K/I	
	Product Code	CB432N22200	CB432N22100	CB434N17700	
1	Front Panel	20000300022S	20000300022S	200003000035T	1
2	Stand Bar	2421212001	2421212001	2421212001	1
3	Filter Sub-Assy	1112210602	1112210602	1112210602	2
4	Front Case Sub-assy	20900700005	20900700005	20900700005	1
5	Upper Guide Louver	1051216601	1051216601	1051216601	1
6	Lower Guide Louver	1051216701	1051216701	1051216701	1
7	Axile Bush	10542704	10542704	10542704	6
8	Air Louver 2	1051216902	1051216902	1051216902	2
9	Air Louver 1	1051216802	1051216802	1051216802	16
10	Connecting Rod	10582086	10582086	10582086	2
11	Louver Clamp	26112158	26112158	26112158	9
12	Water Tray	2018213802	2018213802	2018213802	1
13	Screw Cover	2425200506	2425200506	2425200506	4
14	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
15	Rear Case assy	00000100113	00000100113	00000100113	1
16	Cross Flow Fan 1	10352040	10352040	10352039	1
17	Bearing Holder Sub-assy	26152028	26152028	26152028	1
18	Cross Flow Fan 2	10352039	10352039	10352040	1
19	O-Gasket sub-assy of Bearing	76512051	76512051	76512051	1
20	Left Evaporator Support	24212041	24212041	24212041	1
21	Evaporator Assy	01100100299	01100100299	01100100299	1
22	Wall Mounting Frame	01252398	01252398	01252398	1
23	Fan Motor	1501213401	1501213401	1501213401	1
24	Pipe Clamp	26112071	26112071	26112071	1
25	Drainage Hose	0523001404	0523001404	0523001404	1
26	Cover Plate	2012212402	2012212402	2012212402	1
27	Motor Fixed Clip 1	26112324	26112324	26112324	1
28	SteppingMotor	1521210701	1521210701	1521210701	1
29	Press Plate(Crank)	26112070	26112070	26112070	1
30	Crank-guide	10582041	10582041	10582041	1
31	Upper Crank	10562004	10562004	10562004	1
32	Lower crank	10562005	10562005	10562005	1
33	Electric Box Assy	100002067908	100002003292	100002003292	1
34	Electric Box	2010225006	2010225006	2010225006	1
35	Terminal Board	42011233	42011233	42011233	1
36	Main Board	30138001022	30138001017	30138001017	1
37	Display Board	30565277	30565277	30565277	1
38	Electric Box Cover	2011204404S	2011204404S	2011204404S	1
39	Electric Box Cover	201022523	201022523	2011204404S	1
40	Remote Controller	305001000085	305001000085	305001000085	1
41	Temperature Sensor	390000453	390000453	390000453	1
42	Temperature Sensor	390000592	390000592	390000453	1
43	Detecting plate(WIFI)	30070077	30070077	30070077	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWC36QF-D3DNB2O/I	GWH36QF-D3DNB2O/I	GWH36QF-D3DNB4O/I	
	Product Code	CB432N22900	CB432N23000	CB434N17800	
1	Front Panel	20000300022S	20000300022S	200003000035	1
2	Stand Bar	2421212001	2421212001	2421212001	1
3	Filter Sub-Assy	1112210602	1112210602	1112210602	2
4	Front Case Sub-assy	20900700005	20900700005	20900700005	1
5	Upper Guide Louver	1051216601	1051216601	1051216601	1
6	Lower Guide Louver	1051216701	1051216701	1051216701	1
7	Axile Bush	10542704	10542704	10542704	6
8	Air Louver 2	1051216902	1051216902	1051216902	2
9	Air Louver 1	1051216802	1051216802	1051216802	16
10	Connecting Rod	10582086	10582086	10582086	2
11	Louver Clamp	26112158	26112158	26112158	9
12	Water Tray	2018213802	2018213802	2018213802	1
13	Screw Cover	2425200506	2425200506	2425200506	4
14	Rubber Plug (Water Tray)	76712012	76712012	76712012	1
15	Rear Case assy	00000100113	00000100113	00000100113	1
16	Cross Flow Fan 1	10352040	10352040	10352039	1
17	Bearing Holder Sub-assy	26152028	26152028	26152028	1
18	Cross Flow Fan 2	10352039	10352039	10352040	1
19	O-Gasket sub-assy of Bearing	76512051	76512051	76512051	1
20	Left Evaporator Support	24212041	24212041	24212041	1
21	Evaporator Assy	0110010029901	0110010029901	0110010029901	1
22	Wall Mounting Frame	01252398	01252398	01252398	1
23	Fan Motor	1501213401	1501213401	1501213401	1
24	Pipe Clamp	26112071	26112071	26112071	1
25	Drainage Hose	0523001404	0523001404	0523001404	1
26	Cover Plate	2012212402	2012212402	2012212402	1
27	Motor Fixed Clip 1	26112324	26112324	26112324	1
28	SteppingMotor	1521210701	1521210701	1521210701	1
29	Press Plate(Crank)	26112070	26112070	26112070	1
30	Crank-guide	10582041	10582041	10582041	1
31	Upper Crank	10562004	10562004	10562004	1
32	Lower crank	10562005	10562005	10562005	1
33	Electric Box Assy	100002067908	100002003292	100002003292	1
34	Electric Box	2010225006	2010225006	2010225006	1
35	Terminal Board	42011233	42011233	42011233	1
36	Main Board	30138001022	30138001017	30138001017	1
37	Display Board	30565277	30565277	30565277	1
38	Electric Box Cover	2011204404S	2011204404S	2011204404S	1
39	Electric Box Cover	201022523	201022523	201022523	1
40	Remote Controller	305001000085	305001000085	305001000085	1
41	Temperature Sensor	390000453	390000453	390000453	1
42	Temperature Sensor	390000592	390000592	390000592	1
43	Detecting plate(WIFI)	30070077	30070077	30070077	1

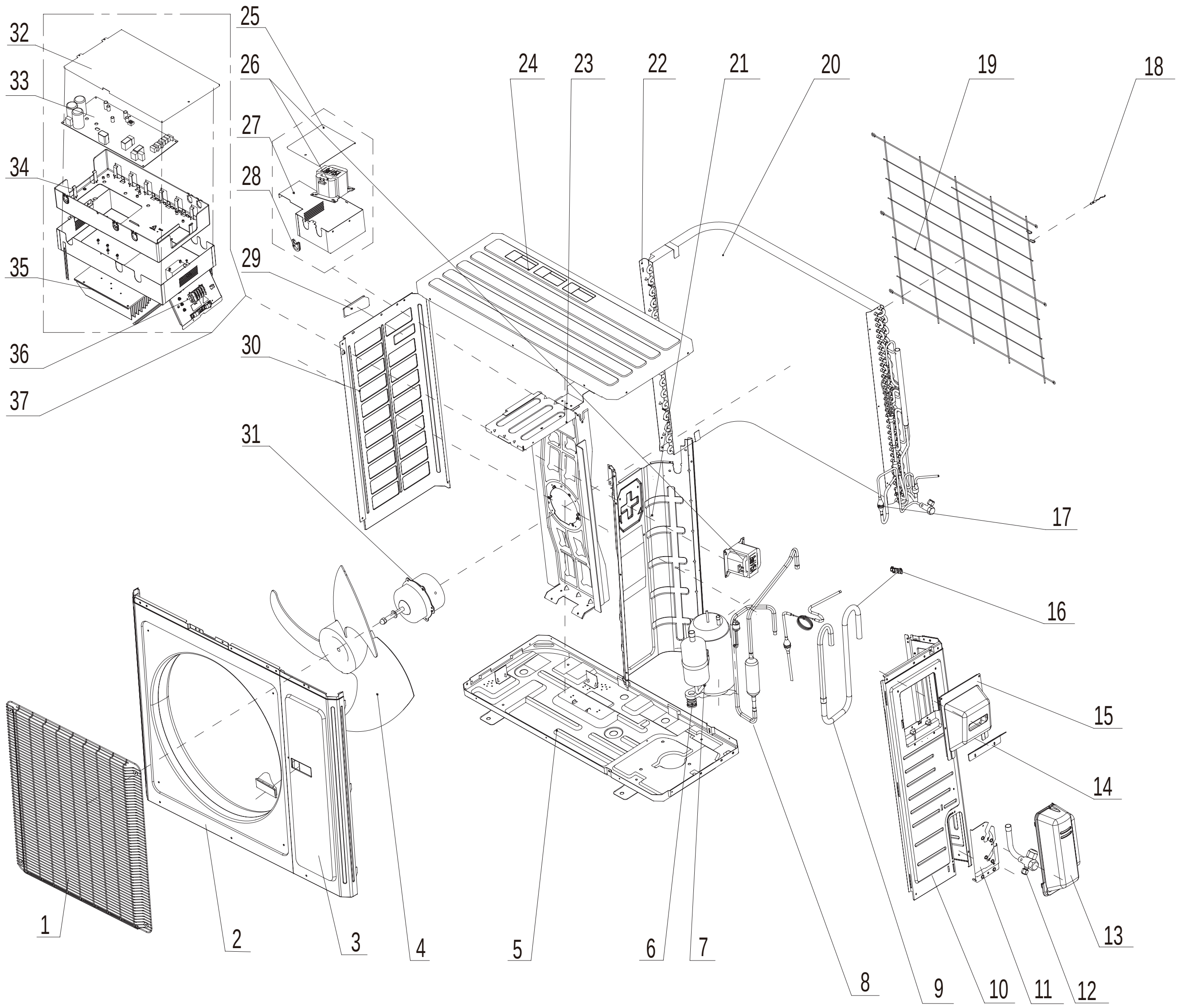
Above data is subject to change without notice.

NO.	Description	Part Code	Qty
		GWC36QF-D3DNB4O/I	
	Product Code	CB434N19000	
1	Front Panel	200003000035	1
2	Stand Bar	2421212001	1
3	Filter Sub-Assy	1112210602	2
4	Front Case Sub-assy	20900700005	1
5	Upper Guide Louver	1051216601	1
6	Lower Guide Louver	1051216701	1
7	Axile Bush	10542704	6
8	Air Louver 2	1051216902	2
9	Air Louver 1	1051216802	16
10	Connecting Rod	10582086	2
11	Louver Clamp	26112158	9
12	Water Tray	2018213802	1
13	Screw Cover	2425200506	4
14	Rubber Plug (Water Tray)	76712012	1
15	Rear Case assy	00000100113	1
16	Cross Flow Fan 1	10352039	1
17	Bearing Holder Sub-assy	26152028	1
18	Cross Flow Fan 2	10352040	1
19	O-Gasket sub-assy of Bearing	76512051	1
20	Left Evaporator Support	24212041	1
21	Evaporator Assy	0110010029901	1
22	Wall Mounting Frame	01252398	1
23	Fan Motor	1501213401	1
24	Pipe Clamp	26112071	1
25	Drainage Hose	0523001404	1
26	Cover Plate	2012212402	1
27	Motor Fixed Clip 1	26112324	1
28	SteppingMotor	1521210701	1
29	Press Plate(Crank)	26112070	1
30	Crank-guide	10582041	1
31	Upper Crank	10562004	1
32	Lower crank	10562005	1
33	Electric Box Assy	100002067908	1
34	Electric Box	2010225006	1
35	Terminal Board	42011233	1
36	Main Board	30138001022	1
37	Display Board	30565277	1
38	Electric Box Cover	2011204404S	1
39	Electric Box Cover	2011204404	1
40	Remote Controller	305001000085	1
41	Temperature Sensor	390000453	1
42	Temperature Sensor	390000592	1
43	Detecting plate(WIFI)	30070077	1

Above data is subject to change without notice.

10.2 Outdoor Unit

GWC30LB-D3DNA3G/O GWC36LB-D3DNA3G/O GWC30QF-D3DNB2K/O GWC36QF-D3DNB2O/O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The component picture is only for reference; please refer to the actual product.

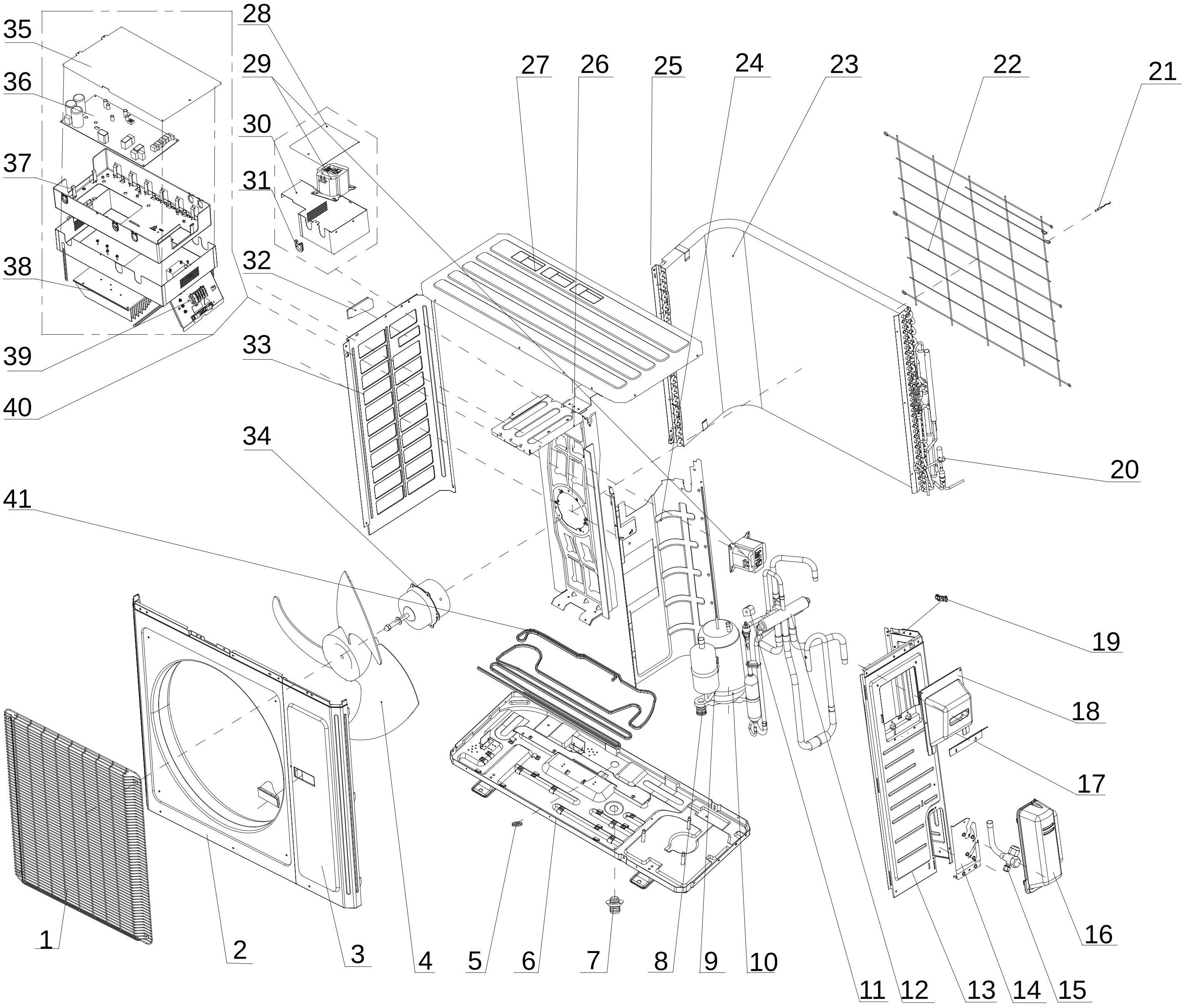
NO.	Description	Product Code			Qty
		GWC30LB-D3DNA3G/O	GWC36LB-D3DNA3G/O	GWC30QF-D3DNB2K/O	
	Product Code	CB171W10700	CB171W10900	CB432W22200	
1	Front Grill	01473050	01473050	016004060005	1
2	Cabinet	0143500401P	0143500401P	0143500401P	1
3	Front Side Plate	01303249P	01303249P	01303249P	1
4	Axial Flow Fan	10335014	10335014	10335014	1
5	Chassis Sub-assy	0280310101P	0280302601P	0280319601P	1
6	Compressor Gasket	76715022	76710207	009012000004	3
7	Compressor and Fittings	00105051	00205275	00900100019501	1
8	Discharge Tube Sub-assy	03001300238	03001300257	030013000617	1
9	Inhalation Tube Sub-assy	03001000246	/	030010000596	1
10	Right Side Plate	0130504402P	0130504402P	0130504402P	1
11	Valve Support Sub-Assy	0171501201P	0171501201P	0171501201	1
12	Cut off Valve	07133157	07130239	07130239	1
13	Valve Cover	22245003	22245003	22245003	1
14	Retaining plate	02115006P	02115006P	02115006P	1
15	Handle assy	02113109	02113109	02113109	1
16	Wiring clamp	26115004	26115004	26115004	1
17	Electric Expansion Valve Sub-Assy	07133688	07133684	07133157	1
18	Temperature Sensor	3900031001	3900031001	3900030901	1
19	Rear Grill	01475013	01475013	01475013	1
20	Condenser Assy	0116350901	0116349101	011002061014	1
21	Clapboard	01233134	01233134	01235089	1
22	Condenser support plate	01175092	01175037	01175092	1
23	Motor Support Sub-Assy	0180287601	01802876	017012000017	1
24	Top Cover Sub-Assy	01255007	01255007	01255020P	1
25	Electric Box Cover	01425279	01425281	20125002	1
26	Reactor	43130192	43130192	/	2
27	Electric Box Sub-Assy	02603620	02603620	100002067581	1
28	Pass wire ring sub-assy	76614102	76614102	/	2
29	left handle	26233053	02113031	02113031	1
30	Left Side Plate	01305043P	01305043P	01305043P	1
31	Fan Motor	15702802	1570280205	15010400000102	1
32	Electric Box Cover	01425281	01425281	20125002	1
33	Main Board	30148338	30138000712	300027060959	1
34	Electric Box	02603614	02603614	20115003	1
35	Radiator	49013046	49010252	4901521502	1
36	Terminal Board	42200006001401	42200006001401	42200006001401	1
37	Electric Box Assy	10000100310	10000100329	100002067581	1

Above data is subject to change without notice.

NO.	Description	Product Code	Qty
		GWC36QF-D3DNB2O/O	
	Product Code	CB432W22900	
1	Front Grill	016004060005	1
2	Cabinet	0143500401P	1
3	Front Side Plate	01303249P	1
4	Axial Flow Fan	10335014	1
5	Chassis Sub-assy	0280319601	1
6	Compressor Gasket	009012000004	3
7	Compressor and Fittings	00900100019501	1
8	Discharge Tube Sub-assy	030013000617	1
9	Inhalation Tube Sub-assy	030010000596	1
10	Right Side Plate	0130504402	1
11	Valve Support Sub-Assy	0171501201P	1
12	Cut off Valve	07130239	1
13	Valve Cover	22245003	1
14	Retaining plate	02115006P	1
15	Handle assy	02113032P	1
16	Wiring clamp	26115004	1
17	Electric Expansion Valve Sub-Assy	030174060043	1
18	Temperature Sensor	3900030901	1
19	Rear Grill	01475013	1
20	Condenser Assy	011002061051	1
21	Clapboard	01235089	1
22	Condenser support plate	01175092	1
23	Motor Support Sub-Assy	017012000017	1
24	Top Cover Sub-Assy	01255020	1
25	Electric Box Cover	20125002	1
26	Reactor	/	/
27	Electric Box Sub-Assy	100002068353	1
28	Pass wire ring sub-assy	/	/
29	left handle	02113031	1
30	Left Side Plate	01305043P	1
31	Fan Motor	15010400000102	1
32	Electric Box Cover	20125002	1
33	Main Board	300027060994	1
34	Electric Box	20115003	1
35	Radiator	4901521502	1
36	Terminal Board	42200006001401	1
37	Electric Box Assy	100002068353	1

Above data is subject to change without notice.

GWH36QF-D3DNB2H/O GWH36QF-D3DNB2J/O GWH30QF-D3DNB2K/O GWH30LB-D3DNA3G/O GWH36LB-D3DNA3G/O GWH36QF-D3DNB2O/O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The component picture is only for reference; please refer to the actual product.

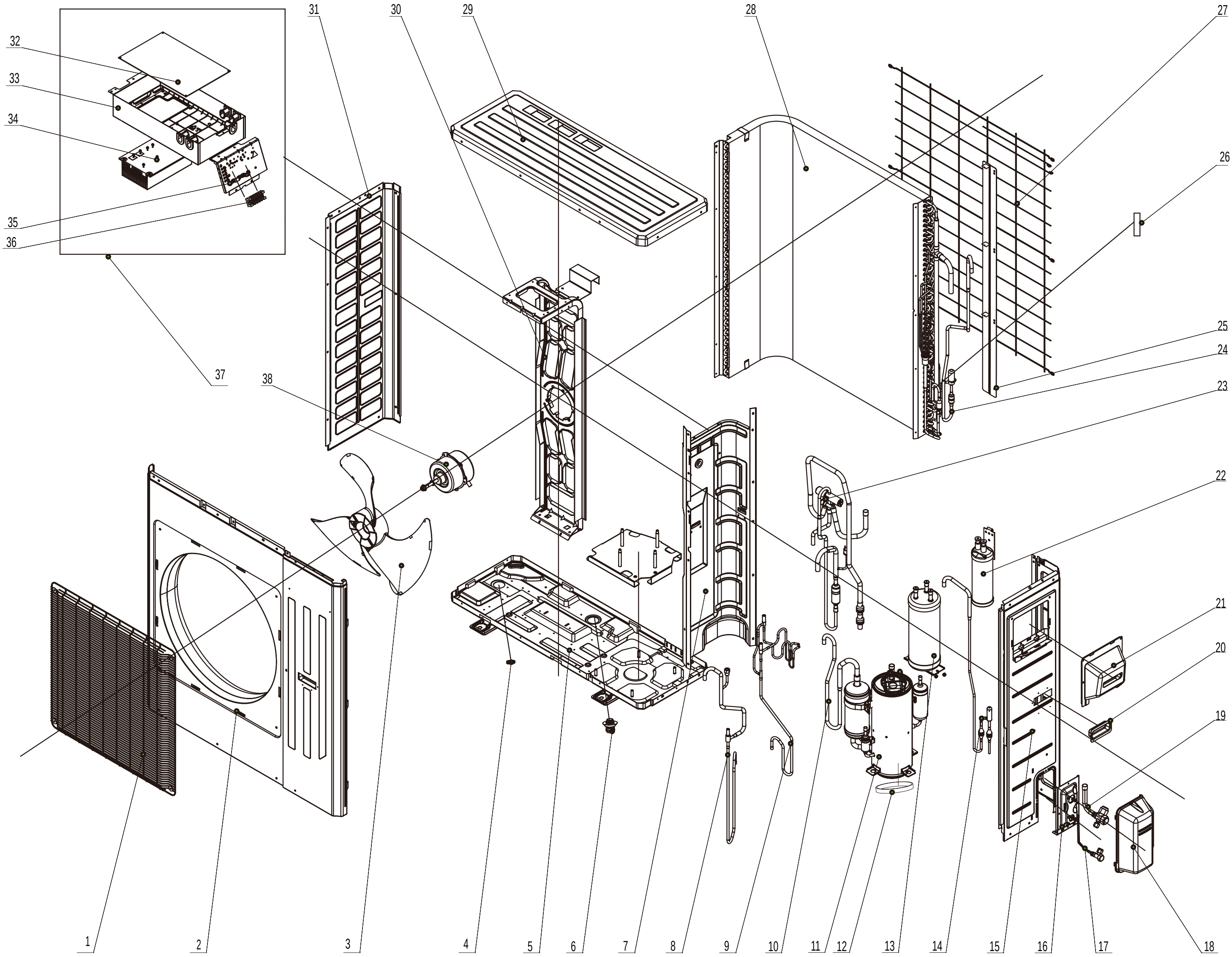
NO.	Description	Part Code			Qty
		GWH36QF-D3DNB2H/O	GWH36QF-D3DNB2J/O	GWH30QF-D3DNB2K/O	
	Product Code	CB432W08100	CB432W20300	CB432W22100	
1	Front Grill	1473050	016004060005	016004060005	1
2	Cabinet	0143500401P	0143500401P	0143500401P	1
3	Front Side Plate	01303249P	01303249P	01303249P	1
4	Axial Flow Fan	10335014	10335014	10335014	1
5	Drainage Plug	7671301802	7671301802	/	1
6	Chassis Sub-assy	0280319605	0280319605	017000060476	1
7	Drainage Connecter	06123401	06123401	/	1
8	Compressor Gasket	76713066	76713066	009012000004	3
9	Compressor and fittings	205200003	00205200003	00900100019501	1
10	Electrical heater	7651000413	7651000413	/	1
11	Magnet Coil	4300040029	4300040029	4300040045	1
12	4-way Valve Assy	30152000213	030152000213	030152000329	1
13	Right Side Plate	0130504402P	0130504402P	0130504402P	1
14	Valve Support Sub-Assy	0171501201P	0171501201P	0171501201P	1
15	Cut-off Valve	07130239	07130239	07130239	1
16	Valve cover	22245003	22245003	22245003	1
17	Retaining plate	02115006P	02115006P	02115006P	1
18	Handle assy	2113109	02113109	02113109	1
19	Wiring clamp	26115004	26115004	26115004	1
20	Electronic expansion valve Sub-Assy	07133684	07133684	030174060043	1
21	Temperature Sensor	3900031001	3900031001	3900030901	1
22	Rear Grill	01475013	01475013	01475013	1
23	Condenser Assy	01163491	01163491	01100200162	1
24	Clapboard	01233134	01233134	01235089	1
25	Condenser support plate	01175037	01175037	01175092	1
26	Motor Support Sub-Assy	01802876	01802876	017012000017	1
27	Top Cover Sub-Assy	1255007	000051000024	000051060049	1
28	Electric Box Cover	01425281	01425281	20125002	1
29	Reactor	43130192	43130192	/	2
30	Electric Box Sub-Assy	02603620	02603620	20115003	1
31	Pass wire ring sub-assy	76614102	76614102	/	2
32	left handle	2113031	02113031	02113031	1
33	Left Side Plate	01305043P	01305043	01305043P	1
34	Fan Motor	1570280000405	1570280000405	15010400000102	1
35	Electric Box Cover	01425281	01425281	20125002	1
36	Main Board	300027000216	300027000216	300027060960	1
37	Electric Box	02603614	02603614	20115003	1
38	Radiator	49010252	49010252	4901521502	1
39	Terminal Board	42200006001401	42200006001401	42200006001401	1
40	Electric Box Assy	100002001028	100002001028	100002067584	1
41	Electrical Heater (Chassis)	7651000413	7651000413	/	1

Above data is subject to change without notice.

NO.	Description	Part Code			Qty
		GWH30LB-D3DNA3G/O	GWH36LB-D3DNA3G/O	GWH36QF-D3DNB2O/O	
	Product Code	CB171W10600	CB171W10800	CB432W23000	
1	Front Grill	01473050	01473050	016004060005	1
2	Cabinet	0143500401P	0143500401P	0143500401P	1
3	Front Side Plate	01303249P	01303249P	01303249P	1
4	Axial Flow Fan	10335014	10335014	10335014	1
5	Drainage Plug	06813401	7671301802	/	1
6	Chassis Sub-assy	02803101P	02803026P	017000060476	1
7	Drainage Connecter	06123401	06123401	/	1
8	Compressor Gasket	76715022	76710207	009012000004	3
9	Compressor and fittings	00105051	00205275	00900100019501	1
10	Electrical heater	7651873209	7651873209	/	1
11	Magnet Coil	4300040029	4300040029	4300040045	1
12	4-way Valve Assy	03123895	03123890	030152000329	1
13	Right Side Plate	0130504402P	0130504402P	0130504402P	1
14	Valve Support Sub-Assy	0171501201P	0171501201P	0171501201P	1
15	Cut-off Valve	07133157	07133157	07133157	1
16	Valve cover	22245003	22245003	22245003	1
17	Retaining plate	02115006P	02115006P	02115006P	1
18	Handle assy	02113109	02113109	02113109	1
19	Wiring clamp	26115004	26115004	26115004	1
20	Electronic expansion valve Sub-Assy	07133688	07133684	030174060043	1
21	Temperature Sensor	3900031001	3900031001	3900030901	1
22	Rear Grill	01475013	01475013	01475013	1
23	Condenser Assy	01163509	01163491	011002061052	1
24	Clapboard	01233134	01233134	01175092	1
25	Condenser support plate	01175092	01175037	01175092	1
26	Motor Support Sub-Assy	0180287601	01802876	017012000017	1
27	Top Cover Sub-Assy	01255007	01255007	000051060049	1
28	Electric Box Cover	01425279	01425281	20125002	1
29	Reactor	43130192	43130192	/	2
30	Electric Box Sub-Assy	02603620	02603620	100002068354	1
31	Pass wire ring sub-assy	76614102	76614102	/	2
32	left handle	26233053	02113031	02113031	1
33	Left Side Plate	01305043P	01305043P	01305043	1
34	Fan Motor	15702802	1570280000405	15010400000102	1
35	Electric Box Cover	01425281	01425281	20125002	1
36	Main Board	30148338	30138000711	300027060993	1
37	Electric Box	02603614	02603614	20115003	1
38	Radiator	49010252	49010252	4901521502	1
39	Terminal Board	42200006001401	42200006001401	42200006001401	1
40	Electric Box Assy	02613050	10000100328	100002068354	1
41	Electrical Heater (Chassis)	765100047	7651000413	/	1

Above data is subject to change without notice.

GWH36QF-D3DNB2I/O GWH30QF-D3DNB2I/O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The component picture is only for reference; please refer to the actual product.

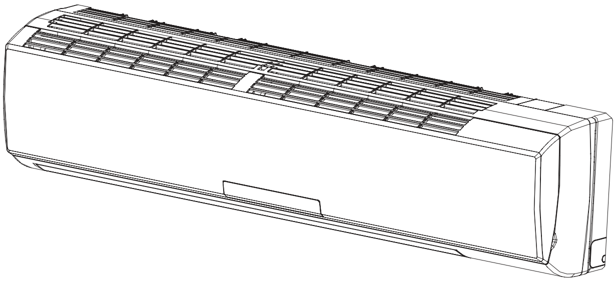
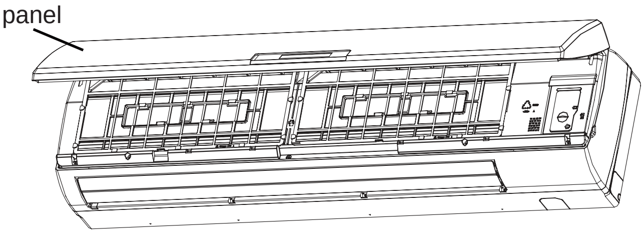
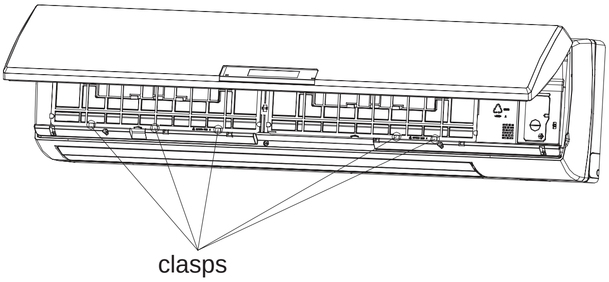
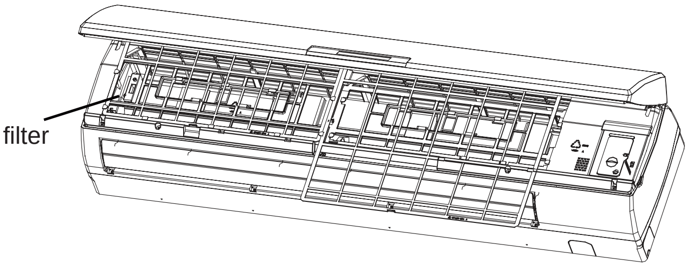
NO.	Description	Part Code		Qty
		GWH36QF-D3DNB2I/O	GWH30QF-D3DNB2I/O	
	Product Code	CB432W10100	CB432W10000	
1	Front Grill	01574106	01574106	1
2	Cabinet	01435007P	01435007P	1
3	Axial Flow Fan	10335014	10335014	1
4	Drainage hole Cap	76715005	76715005	1
5	Electrical Heater (Chassis)	7651000413	7651000413	1
6	Drainage Joint	26113009	26113009	1
7	Clapboard Sub-Assy	0124525304	0124525304	1
8	Magnet Valve Sub-assy	030025000055	030025060028	1
9	Magnet Valve Sub-assy	030025000056	030025060027	1
10	Inhalation Tube Sub-assy	030010000570	030010060043	1
11	Compressor and Fittings	00204100030	009001000013	1
12	Electrical Heater(Compressor)	7651873209	7651873209	1
13	Accumulator	07424100031	07424100031	1
14	Electronic Expansion Valve assy B	030174000139	030174060018	1
15	Right side plate	017038000055	017038000055	1
16	Valve Support Sub-Assy	01805200222P	01805200222P	1
17	Cut off Valve Sub-Assy	030057000153	030057000153	1
18	Valve Cover	22245005	22245005	1
19	Cut off Valve	07133157	07133157	1
20	Handle	2623305301	2623305301	1
21	Handle Assy	02113109	02113032P	1
22	Gas-liquid Separator	07223048	07223048	1
23	4-Way Valve Assy	030152000370	030152060015	1
24	Baffle Plate Sub-assy	01355200016P	01355200016P	1
25	Electronic Expansion Valve assy A	030174000138	030174000138	1
26	Temperature Sensor	3900007201	3900007201	1
27	Rear Grill	01475012	01475012	1
28	Condenser Assy	011002000628	011002060047	1
29	Top Cover	0125500901P	0125500901P	1
30	Motor Support Sub-Assy	017012000155	017012000155	1
31	Left Side Plate	01305064P	01305064P	1
32	Main Board	300027000042	300027000519	1
33	Electric Box Sub-Assy	017007000632	017007000632	1
34	Radiator	43003400001601	43003400001601	1
35	Terminal Board Support sub-assy	01715016	01715016	1
36	Terminal Board	42000100000402	42000100000402	1
37	Electric Box Assy	100002003294	100002004090	1
38	Brushless DC Motor	15010400000106	15010400000106	1

Above data is subject to change without notice.

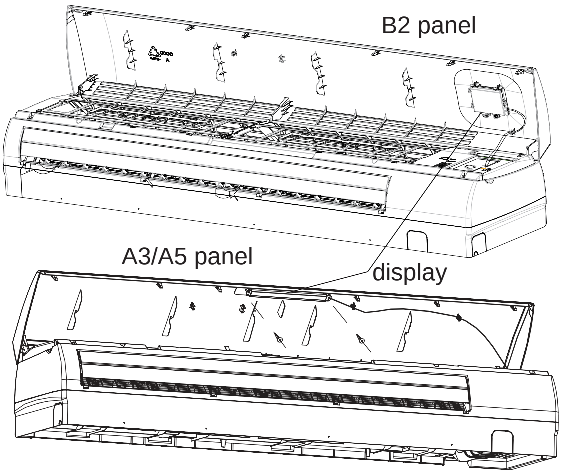
11. Removal Procedure

Warning: Be sure to wait for a minimum of 20 minutes after turning off all power supplies and discharge the refrigerant completely before removal.

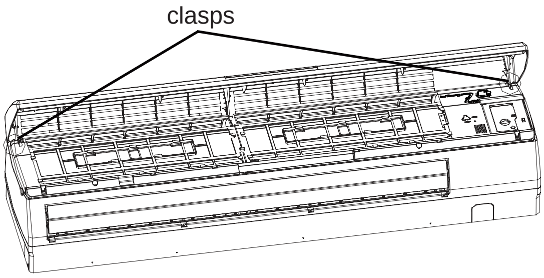
11.1 Removal Procedure of Indoor Unit

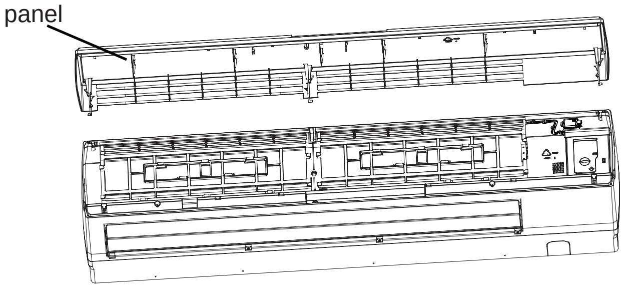
Steps	Procedure	
1.Before disassembly of the unit		
	Axonometric drawing for the complete unit.	
2.Remove filter		
a	Open the panel.	
b	Loosen the clasps on the filter.	
c	Draw out two pieces of filter.	

<table>
<tr><th>Steps</th><th colspan="2">Procedure</th></tr>
<tr><td colspan="2">3.Remove display</td><td rowspan="2">


B2 panel
A3/A5 panel
display

</td></tr>
<tr><td></td><td>Remove screws fixing display, and then remove the display.</td></tr>
<tr><td colspan="2">4.Remove panel</td><td rowspan="2">





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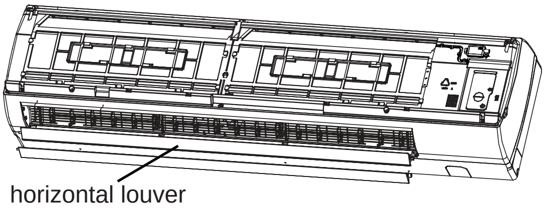
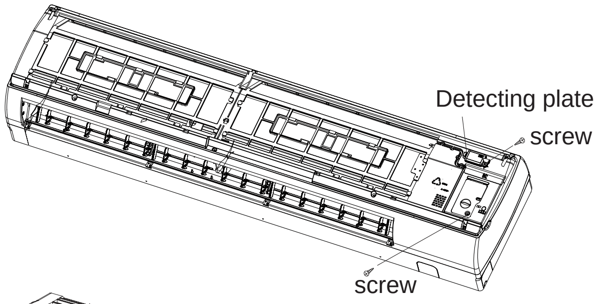
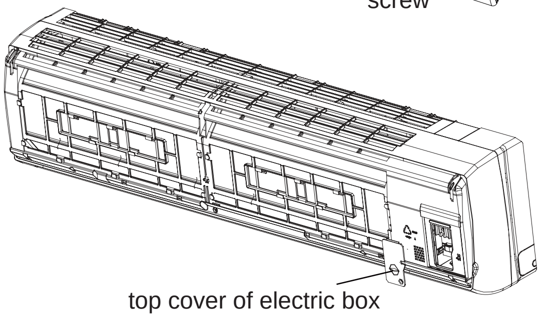
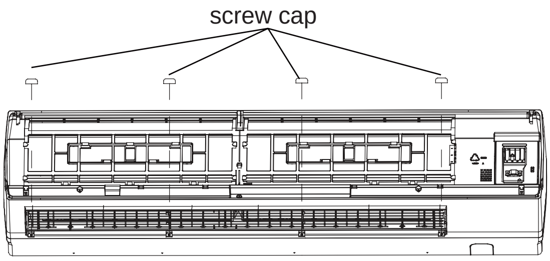
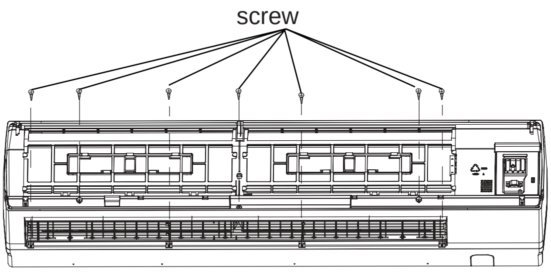
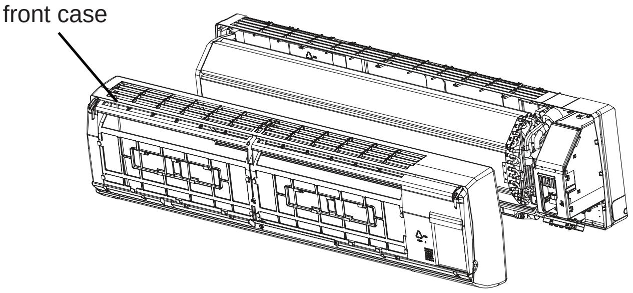
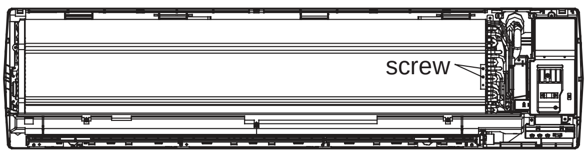
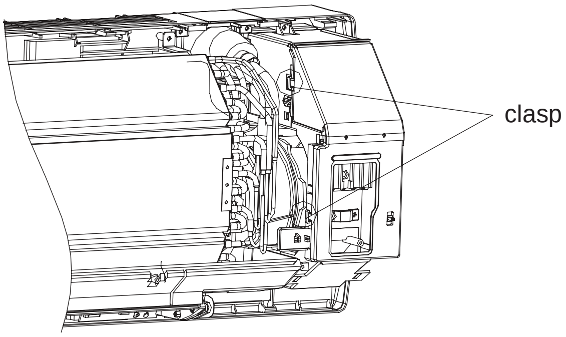
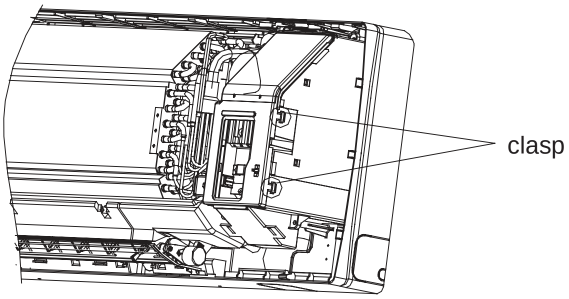
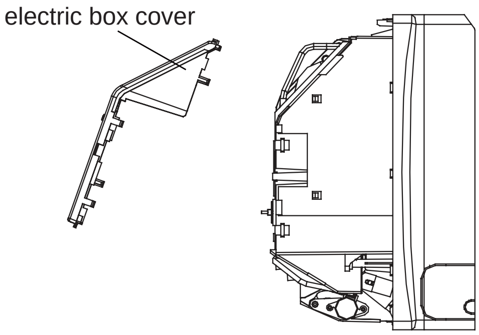
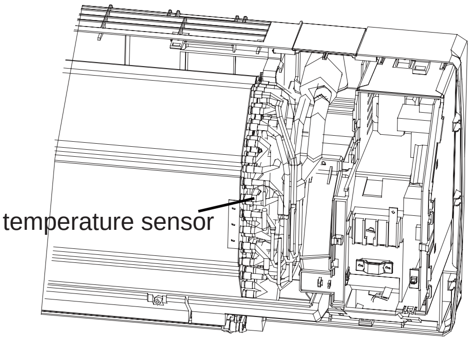
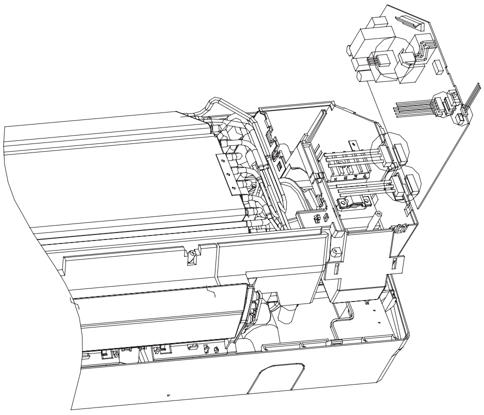
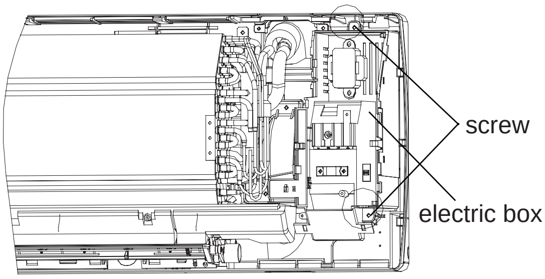
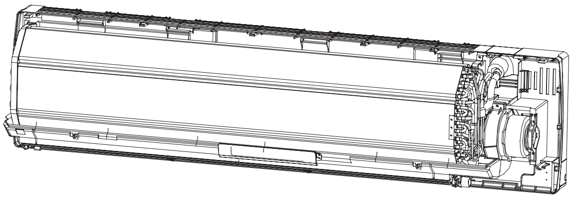
<tr><td></td><td>Pull the clasps at both sides slightly, and then remove the panel.</td></tr>
<tr><td colspan="2">5.Remove horizontal louver</td><td rowspan="2">

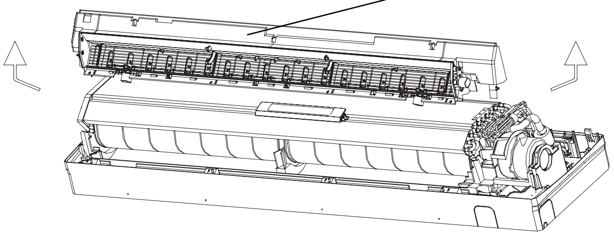
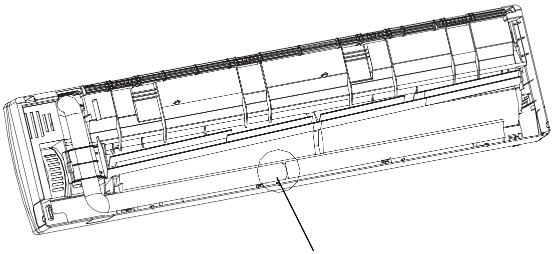
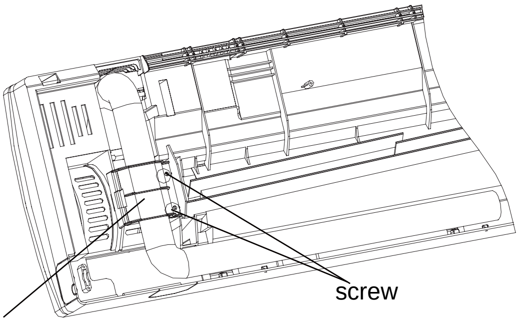
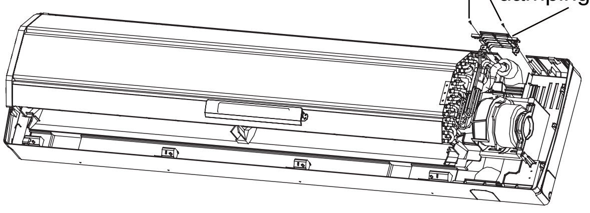

horizontal louver

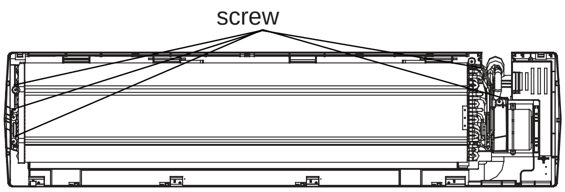
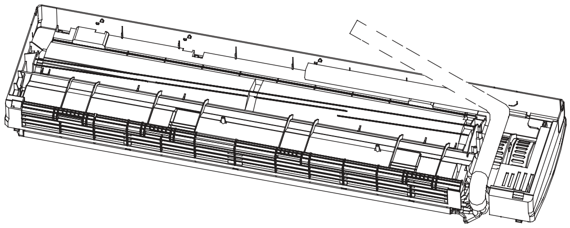
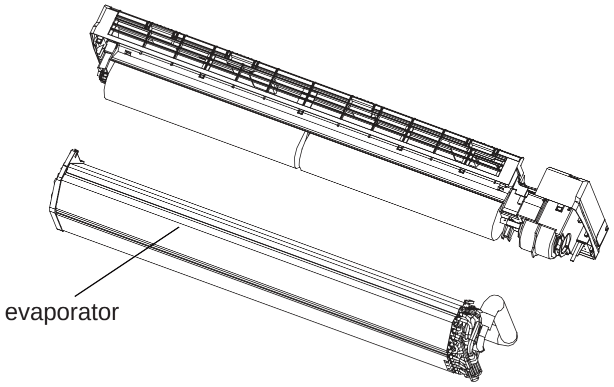
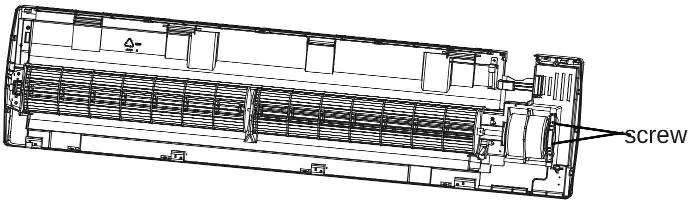
</td></tr>
<tr><td></td><td>Remove the axial bush on the horizontal louver, and then remove the horizontal louver.</td></tr>
</table>

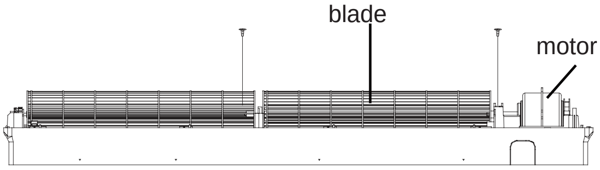
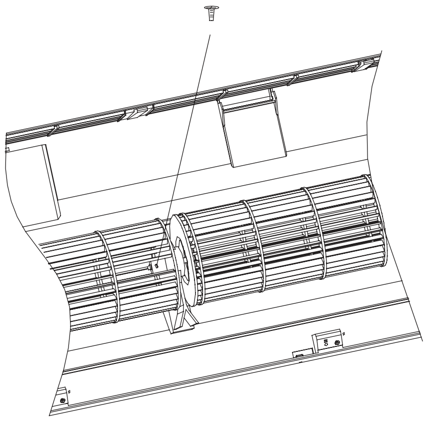
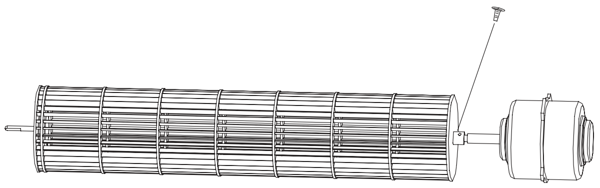
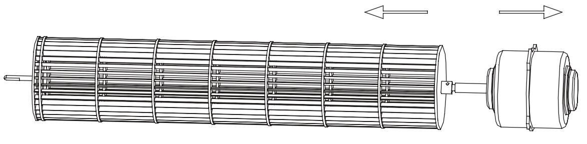
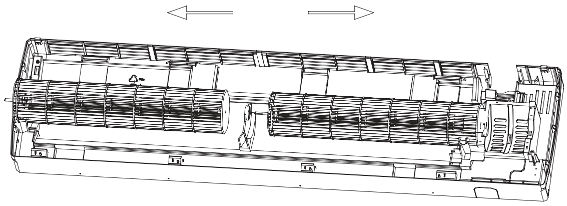
Steps	Procedure	
6.Remove detecting plate and top cover of electric box		
a	Remove the screw fixing detecting plate and then remove the detecting plate. Note:The position of detection board(WIFI) may be different for -different models.	 Detecting plate screw screw
b	Remove screws fixing the top cover of electric box. Remove the top cover of electric box.	 top cover of electric box
7.Remove front case		
a	Remove the screw caps on front case.	
b	Remove screws connecting the front case.	
c	Remove the front case.	

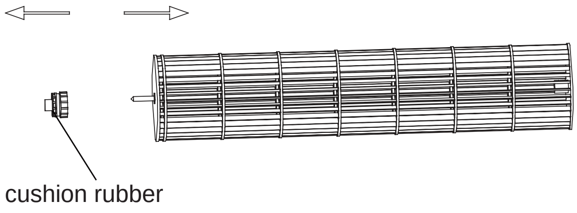
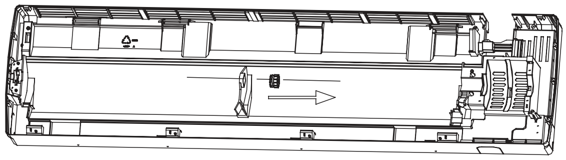
Steps	Procedure	
8.Remove earthing wire		
	Remove earthing screws, and then remove the earthing wire.	
9.Remove electric box cover		
a	Loosen clasps at the left side of electric box.	
b	Loosen clasps on the right side of electric box.	
b	Remove electric box cover.	 electric box cover

Steps	Procedure	
10.Remove temperature sensor		
	Pull out the indoor temperature sensor.	 temperature sensor
11.Remove electric box		
a	Pull out 6 sockets on PCB board.	
b	Pull out two screws on electric box.	 screw electric box
c	Remove the electric box.	

Steps	Procedure	
12.Remove water tray		
	Pull the water tray upwards, and then remove the water tray.	
13.Remove connection pipe between indoor and outdoor units		 connection position for indoor and outdoor units' connection pipe
	Separate the connection pipe between indoor and outdoor units.	
14.Remove pipe-stopping plate		 screw pipe-stopping plate
	Remove two screws on pipe-stopping plate for indoor unit, and then remove the pipe-stopping plate.	
15.Remove damping board		 screw damping board
	Remove 2 screws on damping board, and then remove the damping board.	

Steps	Procedure	
16.Remove evaporator		
a	Remove screws between evaporator and bottom case.	
b	Turn over the indoor unit and adjust the pipe line to the position as shown by the broken line.	
c	Lift up the evaporator, and then remove the evaporator.	
17.Remove the fixing plate of motor		
	Remove 2 screws on fixing plate of motor, and then remove the fixing pate of motor.	

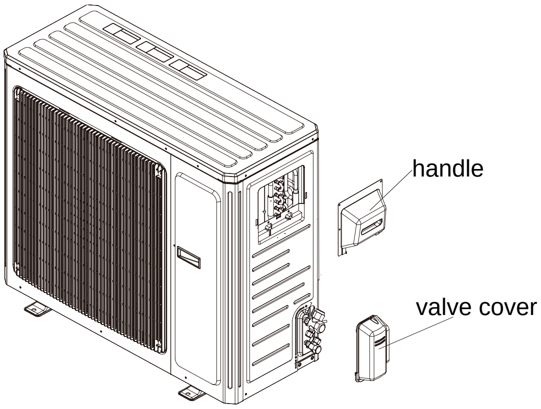
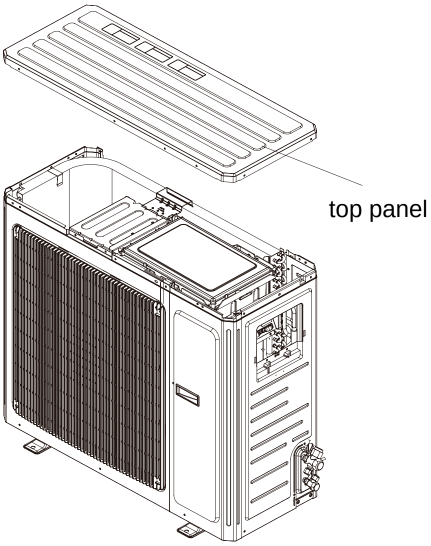
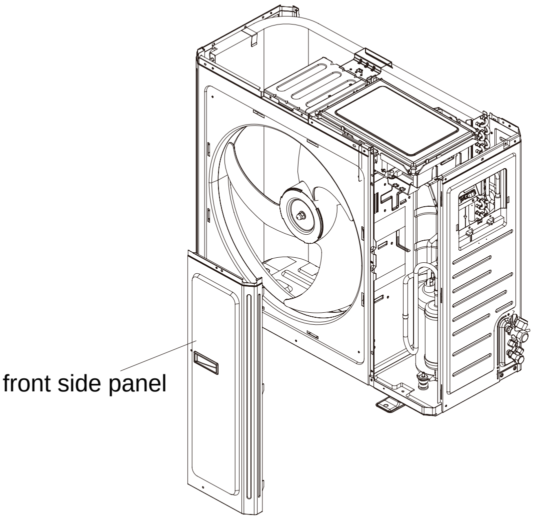
Steps	Procedure	
18.Remove cross flow blade and motor		
a	Remove screws fixing cross flow blade and motor.	  
b	Remove the motor sub-assy.	
c	Separate two cross flow blade.	

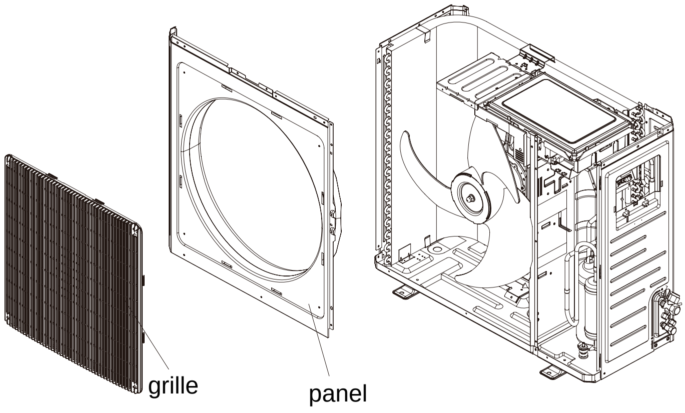
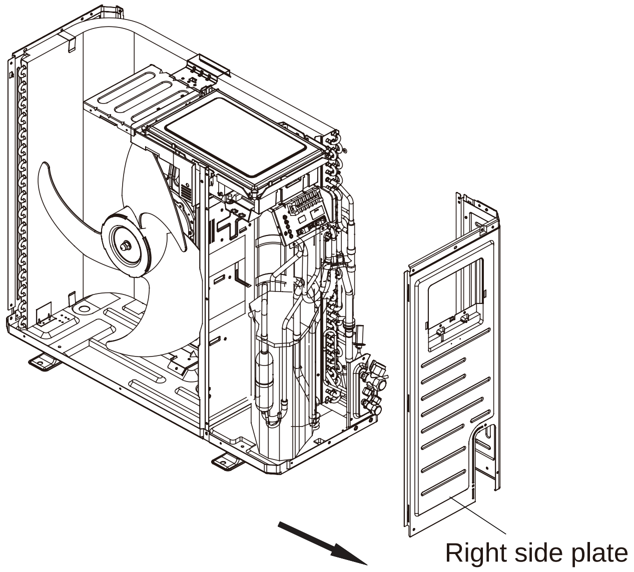
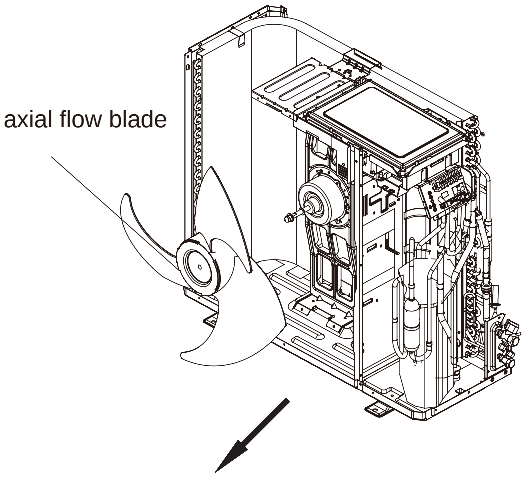
Steps	Procedure	
19.Remove cushion rubber		
a	Remove the cushion rubber on cross flow blade.	
b	Remove the cushion rubber from the base.	

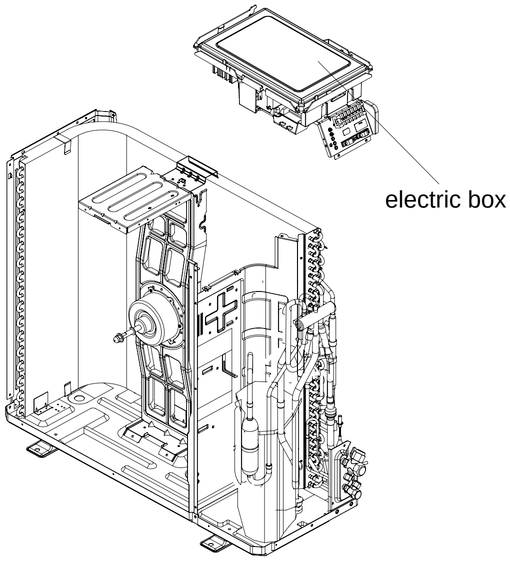
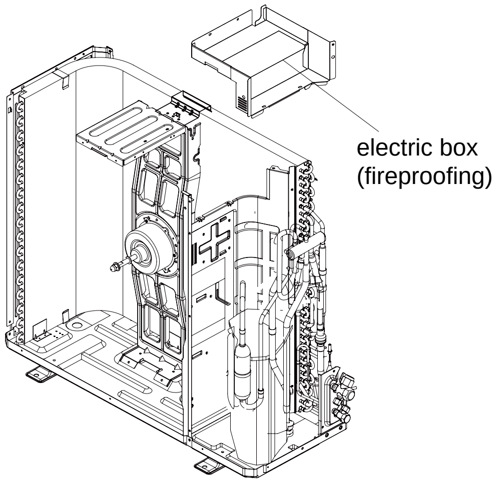
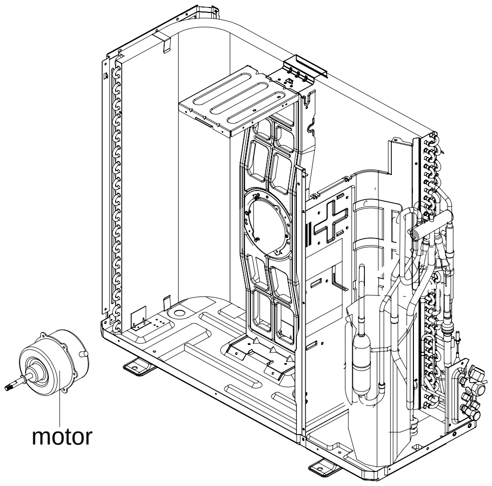
11.2 Removal Procedure of Outdoor Unit

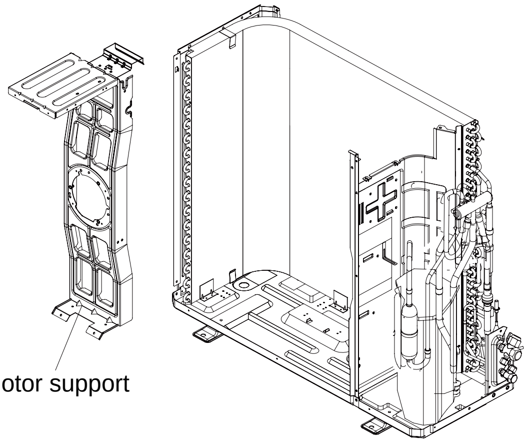
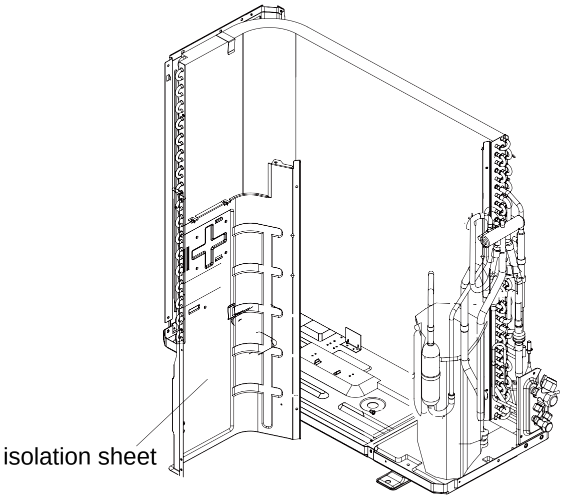
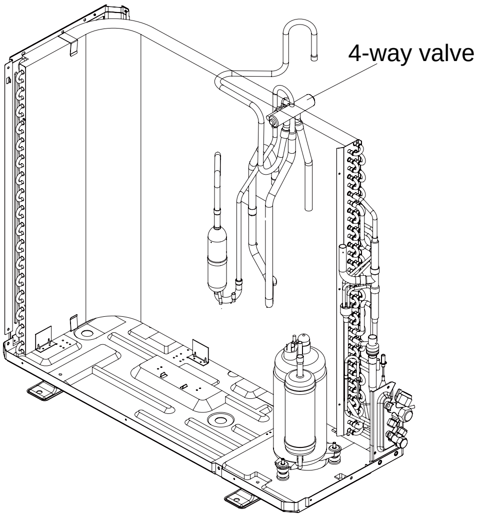
GWC30LB-D3DNA3G/O GWH30LB-D3DNA3G/O GWC36LB-D3DNA3G/O GWH36LB-D3DNA3G/O
GWH36QF-D3DNB2H/O GWH36QF-D3DNB2J/O GWC36QF-D3DNB2O/O GWH36QF-D3DNB2O/O

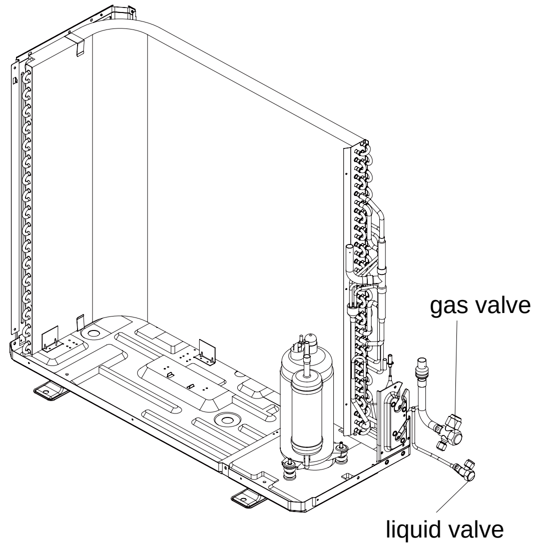
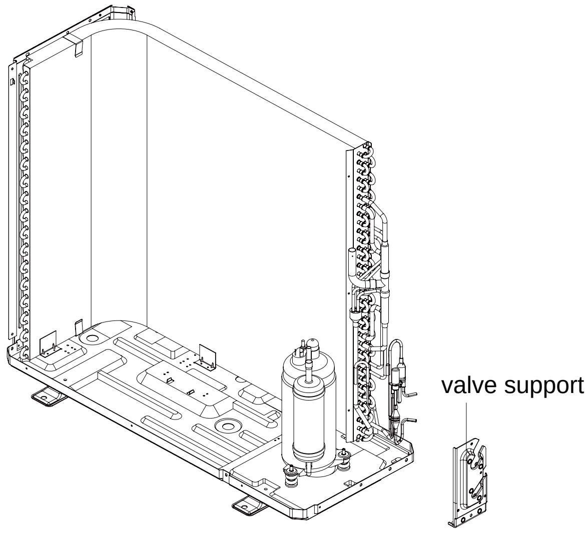
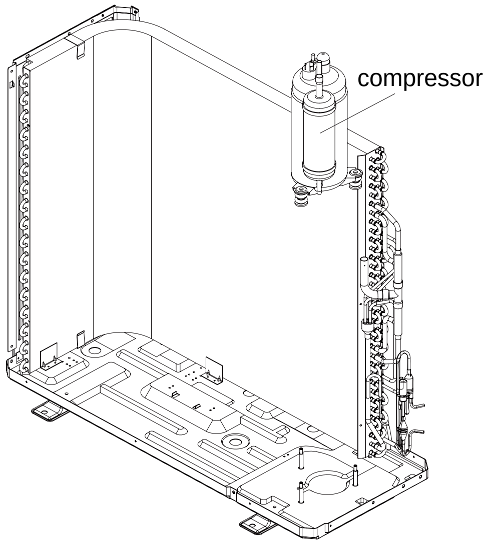
Note: Take heat pump unit for example.

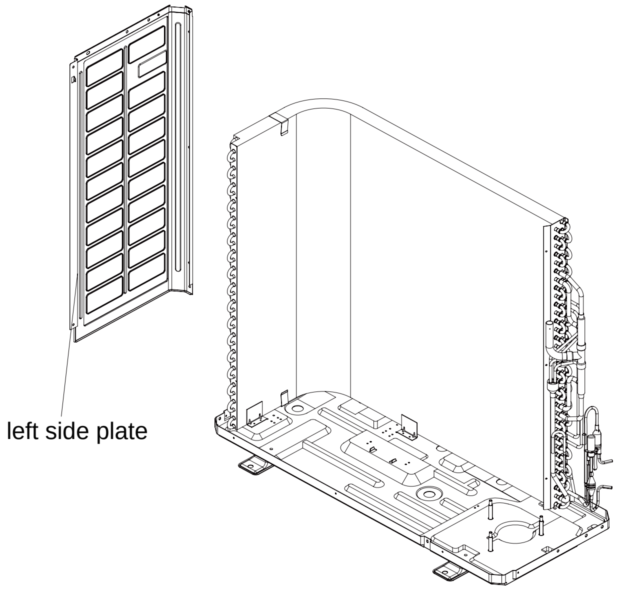
Steps	Procedure	
1. Remove big handle,valve cover and top cover		
	Remove the screw connecting the big handle and right side plate, and then remove the big handle. Remove the screw connecting the valve cover and right side plate, and then remove the valve cover.	
2.Remove top panel		
	Remove the screws connecting the top panel with the front panel and left&right side plate, and then remove the top panel.	
3.Remove front side panel		
	Loosen the screws connecting the front side panel and chassis. Remove the front side panel.	

Steps	Procedure	
4.Remove grille and panel	Twist off the screws connecting the grille and panel, and then remove the grille. Twist off the screws connecting the panel, chassis and motor support with screwd-river, and then remove the panel.	
5.Remove right side plate	Twist off the screws connecting the right side plate and chassis, valve support and condenser, and then remove the right side plate.	
6.Remove axial flow blade	Twist off the nuts on blade with wrench and then remove the axial flow blade.	

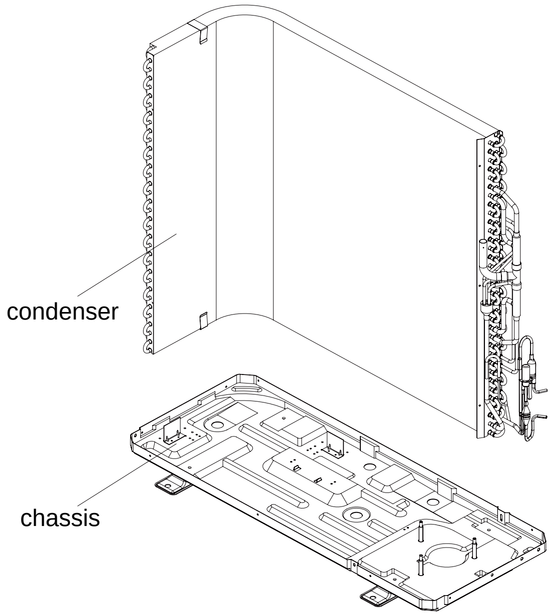
Steps	Procedure	
7.Remove electric box		
	Twist off the screws on electric box, cut off the tieline with scissors or pliers, pull out the wiring terminal, pull it upwards to remove the electric box.	
	Twist off the screws on electric box (fireproofing) with screwdriver, and then remove the electric box (fireproofing).	
8.Remove motor		
	Twist off the tapping screws fixing the motor, pull out the pin of leading wire for motor and then remove the motor.	

Steps	Procedure	
9.Remove motor support		
	Twist off the tapping screws fixingthe motor support, pull it upwardsand then remove the motor support.	
10.Remove isolation sheet		
	Twist off the screws connecting isolation sheet and end plate of condenser and chassis, and then remove the isolation sheet.	
11.Remove 4-way valve		
	Unsolder the pipeline between compressor, condenser, gas and liquid valve, and then remove the 4-way valve. (note: release all refrigerant before unsoldering).	

<table>
<tr><td>Steps</td><td colspan="2">Procedure</td></tr>
<tr><td colspan="2">12.Remove gas valve and liquid valve</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Twist off the 2 bolts fixing the valve sub-assy. Unsolder the soldering joint between gas valve and air-return pipe and then remove the gas valve.(note: when unsoldering the soldering joint, wrap the gas valve with wet cloth completely to avoid the damage to valve, and release all refrigerant completely at first). Unsolder the soldering joint between liquid valve and connection pipe of liquid valve, and then remove the liquid valve.</td></tr>
<tr><td colspan="2">13.Remove valve support</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Twist off the screws connecting valve support and chassis, and then remove the valve support.</td></tr>
<tr><td colspan="2">14.Remove compressor</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Twist off the 3 foot nuts on compressor and then remove the compressor.</td></tr>
</table>

<table>
<tr><th>Steps</th><th colspan="2">Procedure</th></tr>
<tr><td colspan="2">15.Remove left side plate</td><td rowspan="2">

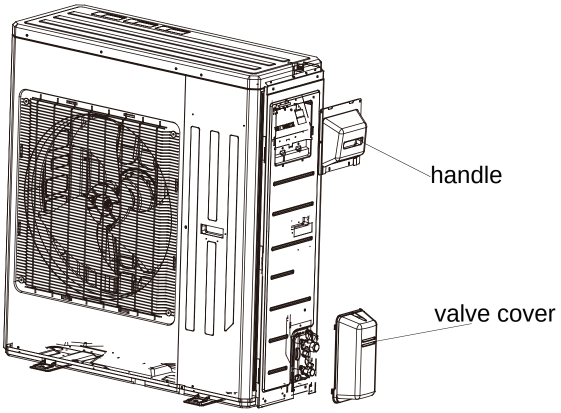
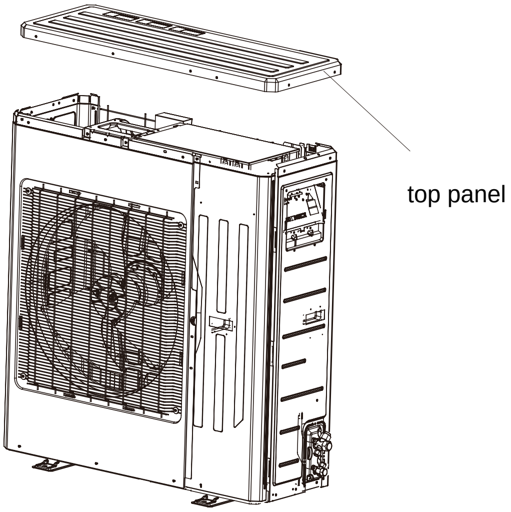
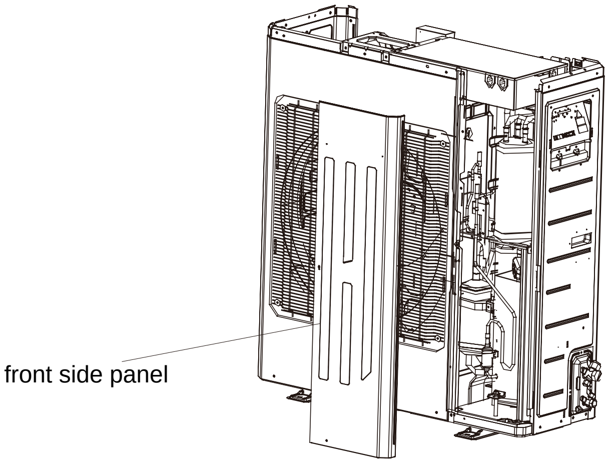
left side plate

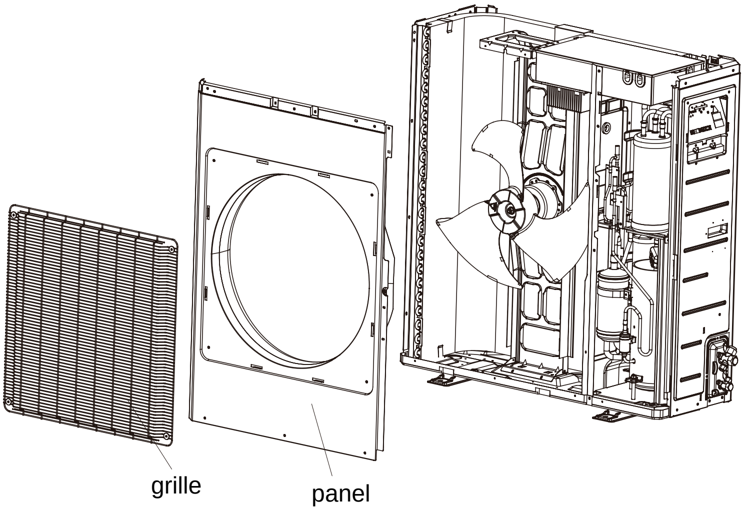
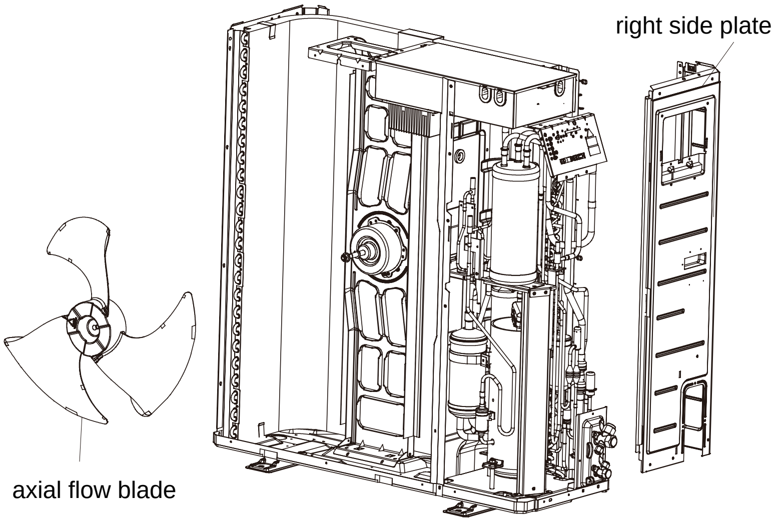
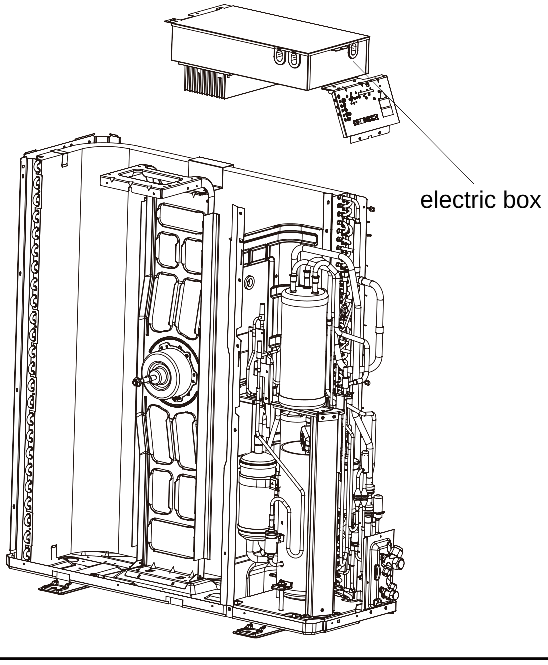
</td></tr>
<tr><td></td><td>Twist off the screws connecting the left side plate and chassis with screwdriver, and then remove the left side plate.</td></tr>
<tr><td colspan="2">16.Remove chassis and condenser</td><td rowspan="2">

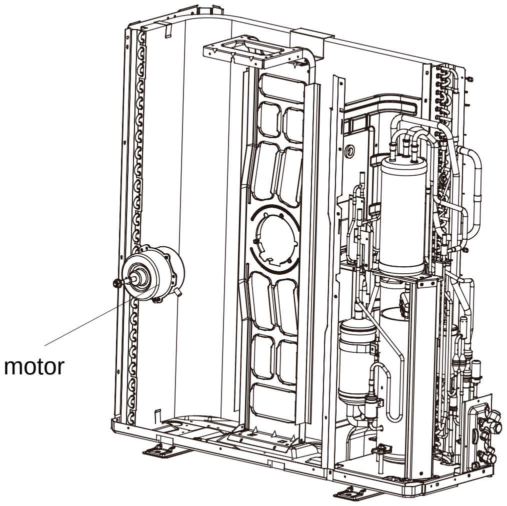
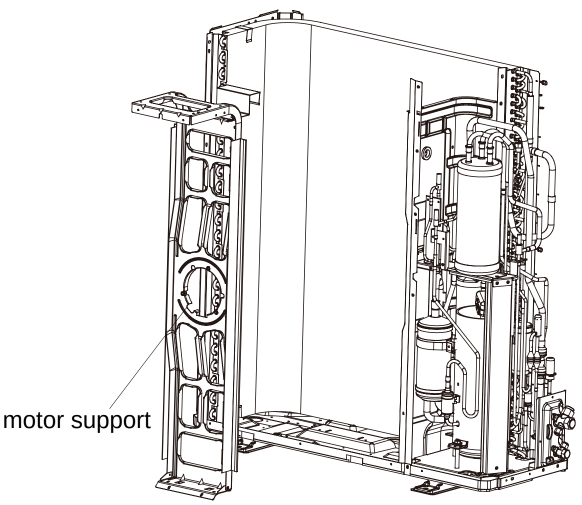
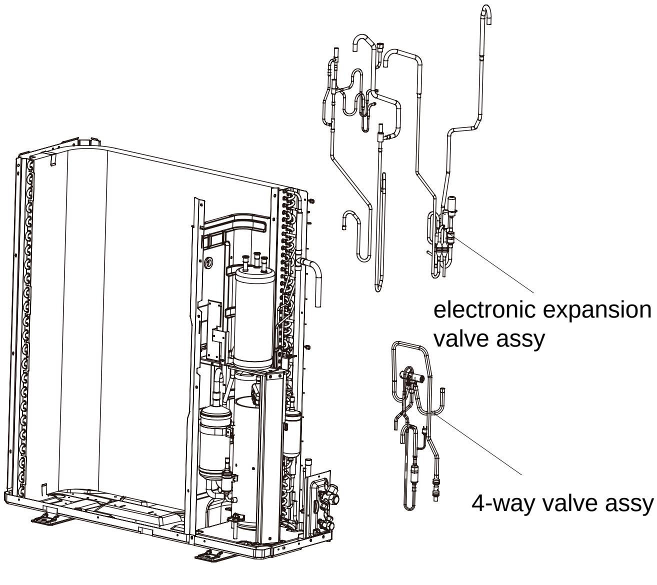
condenser
chassis

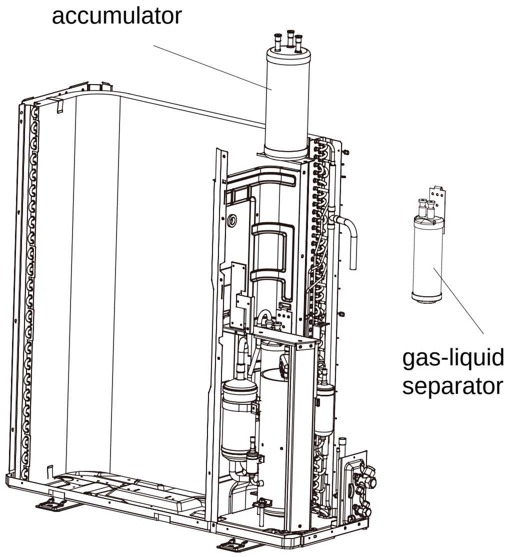
</td></tr>
<tr><td></td><td>Pull it upwards to separate the chassis and condenser.</td></tr>
</table>

GWH36QF-D3DNB2I/O GWH30QF-D3DNB2I/O

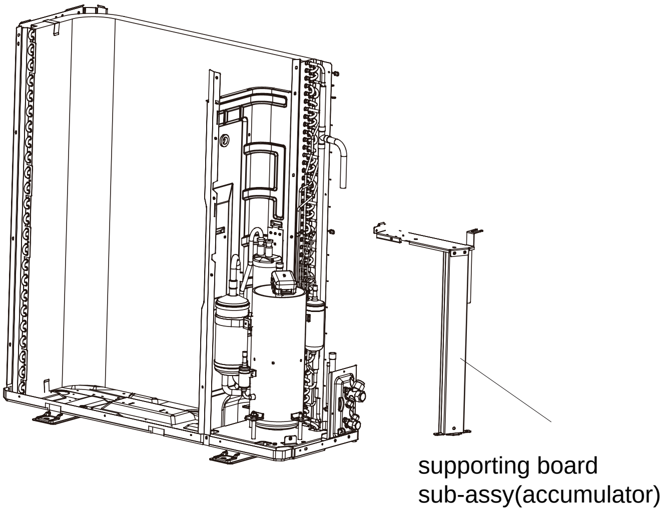
<table>
<tr><th>Steps</th><th colspan="2">Procedure</th></tr>
<tr><td colspan="2">1. Remove big handle,valve cover and top cover</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Remove the screw connecting the big handle and right side plate, and then remove the big handle. Remove the screw connecting the valve cover and right side plate, and then remove the valve cover.</td></tr>
<tr><td colspan="2">2.Remove top panel</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Remove the screws connecting the top panel with the front panel and left&right side plate, and then remove the top panel.</td></tr>
<tr><td colspan="2">3.Remove front side panel</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Loosen the screws connecting the front side panel and chassis. Remove the front side panel.</td></tr>
</table>

<table>
<tr><th>Steps</th><th colspan="2">Procedure</th></tr>
<tr><td colspan="2">4.Remove grille and panel</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Twist off the screws connecting the grille and panel, and then remove the grille.
Twist off the screws connecting the panel, chassis and motor support with screwd-river, and then remove the panel.</td></tr>
<tr><td colspan="2">5.Remove right side plate and axial flow blade</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Twist off the screws connecting the right side plate and chassis, valve support and condenser, and then remove the right side plate.
Twist off the nuts on blade with wrench and then remove the axial flow blade.</td></tr>
<tr><td colspan="2">6.Remove electric box</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Twist off the screws on electric box, cut off the tieline with scissors or pliers, pull out the wiring terminal, pull it upwards to remove the electric box.</td></tr>
</table>

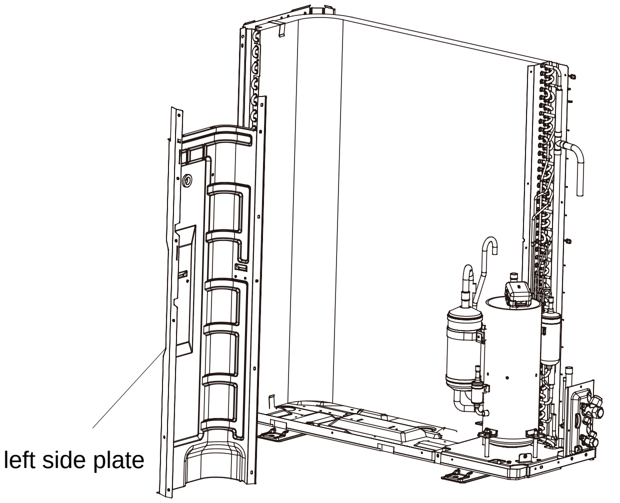
Steps	Procedure	
8.Remove motor	Twist off the tapping screws fixing the motor, pull out the pin of leading wire for motor and then remove the motor.	
9.Remove motor support	Twist off the tapping screws fixingthe motor support, pull it upwardsand then remove the motor support.	
10.Remove 4-way valve assy and electronic expansion valve assy	Unsolder the spot weld of 4-way valve assy, electronic expansion, compressor and condenser, and then remove the 4-way valve assy and electronic expansion sub-assy. Note: When unsoldering the spot weld, wrap the 4-way valve with wet cloth completely to avoid damaging the valve due to high temperature.	

<table>
<tr><th>Steps</th><th colspan="2">Procedure</th></tr>
<tr><td colspan="2">11.Remove accumulator and gas-liquid separator</td><td rowspan="2">

accumulator
gas-liquid separator

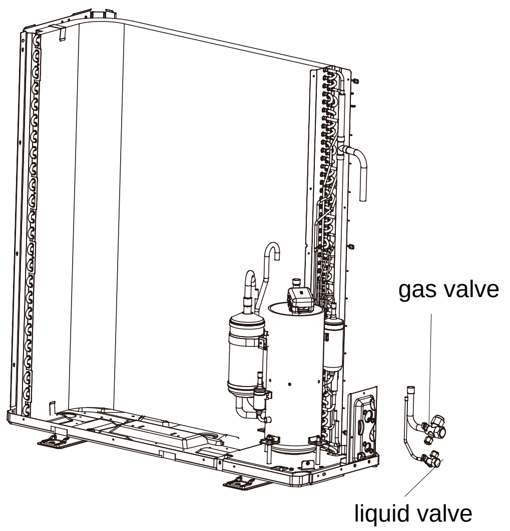
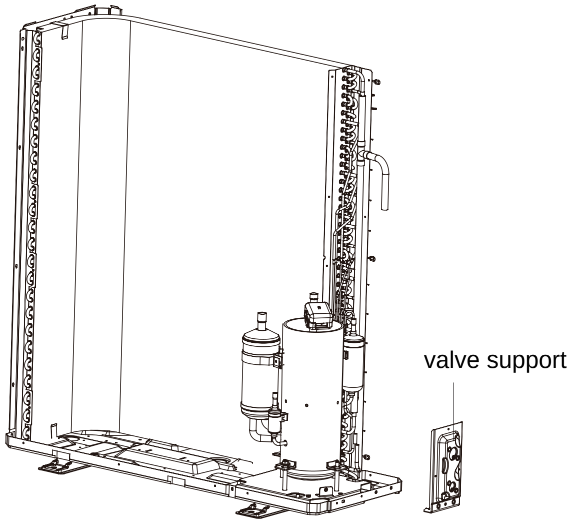
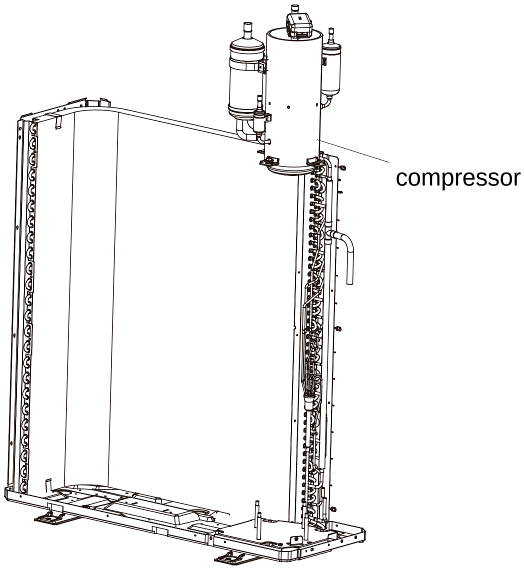
</td></tr>
<tr><td></td><td>Twist off the screws connecting accumulator and gas-liquid separator, and then remove the accumulator and gas-liquid separator.</td></tr>
<tr><td colspan="2">12.Remove supporting board sub-assy(accumulator)</td><td rowspan="2">

supporting board sub-assy(accumulator)

</td></tr>
<tr><td></td><td>Twist off the screws connecting supporting board sub-assy(accumulator) and then remove the supporting board sub-assy(accumulator).</td></tr>
<tr><td colspan="2">13.Remove left side plate</td><td rowspan="2">

left side plate

</td></tr>
<tr><td></td><td>Twist off the screws connecting the left side plate and chassis with screwdriver, and then remove the left side plate.</td></tr>
</table>

Steps	Procedure	
14.Remove gas valve and liquid valve	Twist off the 2 bolts fixing the valve sub-assy. Unsolder the soldering joint between gas valve and air-return pipe and then remove the gas valve.(note: when unsoldering the soldering joint, wrap the gas valve with wet cloth completely to avoid the damage to valve, and release all refrigerant completely at first). Unsolder the soldering joint between liquid valve and connection pipe of liquid valve, and then remove the liquid valve.	
15.Remove valve support	Twist off the screws connecting valve support and chassis, and then remove the valve support.	
16.Remove compressor	Twist off the 3 foot nuts on compressor and then remove the compressor.	

Appendix:

Appendix 1: Reference Sheet of Celsius and Fahrenheit

Conversion formula for Fahrenheit degree and Celsius degree: Tf=Tcx1.8+32

Set temperature

Fahrenheit display temperature（℉）	Fahrenheit（℉）	Celsius（℃）		Fahrenheit display temperature（℉）	Fahrenheit（℉）	Celsius（℃）		Fahrenheit display temperature（℉）	Fahrenheit（℉）	Celsius（℃）
61	60.8	16		69/70	69.8	21		78/79	78.8	26
62/63	62.6	17		71/72	71.6	22		80/81	80.6	27
64/65	64.4	18		73/74	73.4	23		82/83	82.4	28
66/67	66.2	19		75/76	75.2	24		84/85	84.2	29
68	68	20		77	77	25		86	86	30

Ambient temperature

Fahrenheit display temperature（℉）	Fahrenheit（℉）	Celsius（℃）		Fahrenheit display temperature（℉）	Fahrenheit（℉）	Celsius （℃）		Fahrenheit display temperature（℉）	Fahrenheit（℉）	Celsius（℃）
32/33	32	0		55/56	55.4	13		79/80	78.8	26
34/35	33.8	1		57/58	57.2	14		81	80.6	27
36	35.6	2		59/60	59	15		82/83	82.4	28
37/38	37.4	3		61/62	60.8	16		84/85	84.2	29
39/40	39.2	4		63	62.6	17		86/87	86	30
41/42	41	5		64/65	64.4	18		88/89	87.8	31
43/44	42.8	6		66/67	66.2	19		90	89.6	32
45	44.6	7		68/69	68	20		91/92	91.4	33
46/47	46.4	8		70/71	69.8	21		93/94	93.2	34
48/49	48.2	9		72	71.6	22		95/96	95	35
50/51	50	10		73/74	73.4	23		97/98	96.8	36
52/53	51.8	11		75/76	75.2	24		99	98.6	37
54	53.6	12		77/78	77	25				

Appendix 2: Configuration of Connection Pipe

1.Standard length of connection pipe (More details please refer to the specifications.)

2.Min. length of connection pipe is 9.84ft.

3.Max. length of connection pipe and max. high difference.(More details please refer to the specifications.)

4.The additional refrigerant oil and refrigerant charging required after prolonging connection pipe

● After the length of connection pipe is prolonged for 32.81ft at the basis of standard length, you should add 5ml of refrigerant oil for each additional 16.40ft of connection pipe.

● The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):

● When the length of connection pipe is above 16.40ft, add refrigerant according to the prolonged length of liquid pipe. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See the following sheet.

● Additional refrigerant charging amount = prolonged length of liquid pipe X additional refrigerant charging amount per meter

Additional refrigerant charging amount for R22, R407C, R410A and R134a			
Diameter of connection pipe		Outdoor unit throttle	
Liquid pipe(inch)	Gas pipe(inch)	Cooling only(oz/ft.)	Cooling and heating(oz/ft.)
Φ1/4	Φ3/8or Φ1/2	0.2	0.2
Φ1/4 or Φ3/8	Φ5/8 or Φ3/4	0.2	0.2
Φ1/2	Φ3/4 or Φ7/8	0.3	1.3
Φ5/8	Φ1 or Φ1 1/4	0.7	1.3
Φ3/4	/	2.7	2.7
Φ7/8	/	3.8	3.8

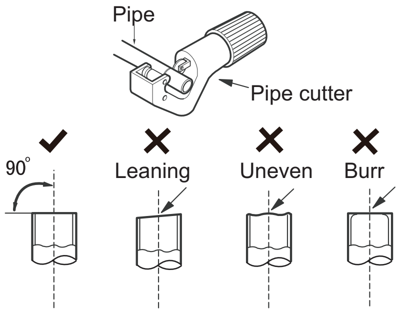
Appendix 3: Pipe Expanding Method

⚠ **Note:**

Improper pipe expanding is the main cause of refrigerant leakage.Please expand the pipe according to the following steps:

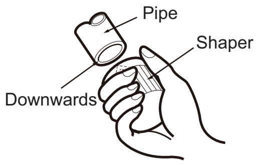
A:Cut the pip

- Confirm the pipe length according to the distance of indoor unit and outdoor unit.
- Cut the required pipe with pipe cutter.


Pipe
Pipe cutter
✓
90°
✗
Leaning
✗
Uneven
✗
Burr

B:Remove the burrs

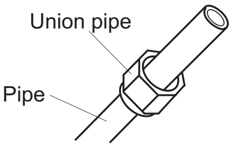
- Remove the burrs with shaper and prevent the burrs from getting into the pipe.


Pipe
Shaper
Downwards

C:Put on suitable insulating pipe

D:Put on the union nut

- Remove the union nut on the indoor connection pipe and outdoor valve; install the union nut on the pipe.


Union pipe
Pipe

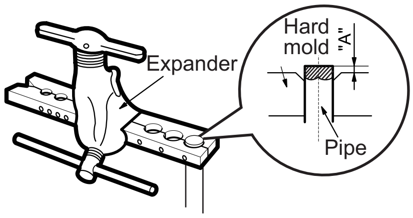
E:Expand the port

- Expand the port with expander.

⚠ **Note:**

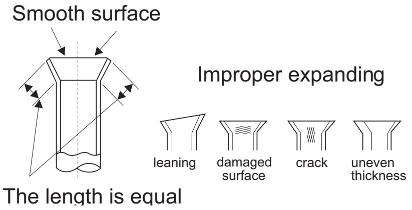
- "A" is different according to the diameter, please refer to the sheet below:

Outer diameter(inch)	A(inch)	
	Max	Min
Φ1/4	2/39	1/36
Φ3/8	1/16	1/51
Φ1/2	1/14	1/51
Φ5/8	5/53	2/23


Expander
Hard mold
"A"
Pipe

F:Inspection

- Check the quality of expanding port. If there is any blemish, expand the port again according to the steps above.


Smooth surface
Improper expanding
leaning
damaged surface
crack
uneven thickness
The length is equal

Appendix 4: List of Resistance for Temperature Sensor

Resistance Table of Ambient Temperature Sensor for Indoor and Outdoor Units(15K)

Temp.(°F)	Resistance(kΩ)		Temp.(°F)	Resistance(kΩ)		Temp.(°F)	Resistance(kΩ)		Temp.(°F)	Resistance(kΩ)
-2.2	138.1		68	18.75		138.2	3.848		208.4	1.071
-0.4	128.6		69.8	17.93		140	3.711		210.2	1.039
1.4	121.6		71.6	17.14		141.8	3.579		212	1.009
3.2	115		73.4	16.39		143.6	3.454		213.8	0.98
5	108.7		75.2	15.68		145.4	3.333		215.6	0.952
6.8	102.9		77	15		147.2	3.217		217.4	0.925
8.6	97.4		78.8	14.36		149	3.105		219.2	0.898
10.4	92.22		80.6	13.74		150.8	2.998		221	0.873
12.2	87.35		82.4	13.16		152.6	2.896		222.8	0.848
14	82.75		84.2	12.6		154.4	2.797		224.6	0.825
15.8	78.43		86	12.07		156.2	2.702		226.4	0.802
17.6	74.35		87.8	11.57		158	2.611		228.2	0.779
19.4	70.5		89.6	11.09		159.8	2.523		230	0.758
21.2	66.88		91.4	10.63		161.6	2.439		231.8	0.737
23	63.46		93.2	10.2		163.4	2.358		233.6	0.717
24.8	60.23		95	9.779		165.2	2.28		235.4	0.697
26.6	57.18		96.8	9.382		167	2.206		237.2	0.678
28.4	54.31		98.6	9.003		168.8	2.133		239	0.66
30.2	51.59		100.4	8.642		170.6	2.064		240.8	0.642
32	49.02		102.2	8.297		172.4	1.997		242.6	0.625
33.8	46.6		104	7.967		174.2	1.933		244.4	0.608
35.6	44.31		105.8	7.653		176	1.871		246.2	0.592
37.4	42.14		107.6	7.352		177.8	1.811		248	0.577
39.2	40.09		109.4	7.065		179.6	1.754		249.8	0.561
41	38.15		111.2	6.791		181.4	1.699		251.6	0.547
42.8	36.32		113	6.529		183.2	1.645		253.4	0.532
44.6	34.58		114.8	6.278		185	1.594		255.2	0.519
46.4	32.94		116.6	6.038		186.8	1.544		257	0.505
48.2	31.38		118.4	5.809		188.6	1.497		258.8	0.492
50	29.9		120.2	5.589		190.4	1.451		260.6	0.48
51.8	28.51		122	5.379		192.2	1.408		262.4	0.467
53.6	27.18		123.8	5.197		194	1.363		264.2	0.456
55.4	25.92		125.6	4.986		195.8	1.322		266	0.444
57.2	24.73		127.4	4.802		197.6	1.282		267.8	0.433
59	23.6		129.2	4.625		199.4	1.244		269.6	0.422
60.8	22.53		131	4.456		201.2	1.207		271.4	0.412
62.6	21.51		132.8	4.294		203	1.171		273.2	0.401
64.4	20.54		134.6	4.139		204.8	1.136		275	0.391
66.2	19.63		136.4	3.99		206.6	1.103		276.8	0.382

Resistance Table of Tube Temperature Sensors for Indoor and Outdoor (20K)

Temp.(°F)	Resistance(kΩ)		Temp.(°F)	Resistance(kΩ)		Temp.(°F)	Resistance(kΩ)		Temp.(°F)	Resistance(kΩ)
-2.2	181.4		68	25.01		138.2	5.13		208.4	1.427
-0.4	171.4		69.8	23.9		140	4.948		210.2	1.386
1.4	162.1		71.6	22.85		141.8	4.773		212	1.346
3.2	153.3		73.4	21.85		143.6	4.605		213.8	1.307
5	145		75.2	20.9		145.4	4.443		215.6	1.269
6.8	137.2		77	20		147.2	4.289		217.4	1.233
8.6	129.9		78.8	19.14		149	4.14		219.2	1.198
10.4	123		80.6	18.13		150.8	3.998		221	1.164
12.2	116.5		82.4	17.55		152.6	3.861		222.8	1.131
14	110.3		84.2	16.8		154.4	3.729		224.6	1.099
15.8	104.6		86	16.1		156.2	3.603		226.4	1.069
17.6	99.13		87.8	15.43		158	3.481		228.2	1.039
19.4	94		89.6	14.79		159.8	3.364		230	1.01
21.2	89.17		91.4	14.18		161.6	3.252		231.8	0.983
23	84.61		93.2	13.59		163.4	3.144		233.6	0.956
24.8	80.31		95	13.04		165.2	3.04		235.4	0.93
26.6	76.24		96.8	12.51		167	2.94		237.2	0.904
28.4	72.41		98.6	12		168.8	2.844		239	0.88
30.2	68.79		100.4	11.52		170.6	2.752		240.8	0.856
32	65.37		102.2	11.06		172.4	2.663		242.6	0.833
33.8	62.13		104	10.62		174.2	2.577		244.4	0.811
35.6	59.08		105.8	10.2		176	2.495		246.2	0.77
37.4	56.19		107.6	9.803		177.8	2.415		248	0.769
39.2	53.46		109.4	9.42		179.6	2.339		249.8	0.746
41	50.87		111.2	9.054		181.4	2.265		251.6	0.729
42.8	48.42		113	8.705		183.2	2.194		253.4	0.71
44.6	46.11		114.8	8.37		185	2.125		255.2	0.692
46.4	43.92		116.6	8.051		186.8	2.059		257	0.674
48.2	41.84		118.4	7.745		188.6	1.996		258.8	0.658
50	39.87		120.2	7.453		190.4	1.934		260.6	0.64
51.8	38.01		122	7.173		192.2	1.875		262.4	0.623
53.6	36.24		123.8	6.905		194	1.818		264.2	0.607
55.4	34.57		125.6	6.648		195.8	1.736		266	0.592
57.2	32.98		127.4	6.403		197.6	1.71		267.8	0.577
59	31.47		129.2	6.167		199.4	1.658		269.6	0.563
60.8	30.04		131	5.942		201.2	1.609		271.4	0.549
62.6	28.68		132.8	5.726		203	1.561		273.2	0.535
64.4	27.39		134.6	5.519		204.8	1.515		275	0.521
66.2	26.17		136.4	5.32		206.6	1.47		276.8	0.509

Resistance Table of Discharge Temperature Sensor for Outdoor(50K)

Temp.(°F)	Resistance(kΩ)		Temp.(°F)	Resistance(kΩ)		Temp.(°F)	Resistance(kΩ)		Temp.(°F)	Resistance(kΩ)
-20.2	853.5		50	98		120.2	18.34		190.4	4.754
-18.4	799.8		51.8	93.42		122	17.65		192.2	4.609
-16.6	750		53.6	89.07		123.8	16.99		194	4.469
-14.8	703.8		55.4	84.95		125.6	16.36		195.8	4.334
-13	660.8		57.2	81.05		127.4	15.75		197.6	4.204
-11.2	620.8		59	77.35		129.2	15.17		199.4	4.079
-9.4	580.6		60.8	73.83		131	14.62		201.2	3.958
-7.6	548.9		62.6	70.5		132.8	14.09		203	3.841
-5.8	516.6		64.4	67.34		134.6	13.58		204.8	3.728
-4	486.5		66.2	64.33		136.4	13.09		206.6	3.619
-2.2	458.3		68	61.48		138.2	12.62		208.4	3.514
-0.4	432		69.8	58.77		140	12.17		210.2	3.413
1.4	407.4		71.6	56.19		141.8	11.74		212	3.315
3.2	384.5		73.4	53.74		143.6	11.32		213.8	3.22
5	362.9		75.2	51.41		145.4	10.93		215.6	3.129
6.8	342.8		77	49.19		147.2	10.54		217.4	3.04
8.6	323.9		78.8	47.08		149	10.18		219.2	2.955
10.4	306.2		80.6	45.07		150.8	9.827		221	2.872
12.2	289.6		82.4	43.16		152.6	9.489		222.8	2.792
14	274		84.2	41.34		154.4	9.165		224.6	2.715
15.8	259.3		86	39.61		156.2	8.854		226.4	2.64
17.6	245.6		87.8	37.96		158	8.555		228.2	2.568
19.4	232.6		89.6	36.38		159.8	8.268		230	2.498
21.2	220.5		91.4	34.88		161.6	7.991		231.8	2.431
23	209		93.2	33.45		163.4	7.726		233.6	2.365
24.8	198.3		95	32.09		165.2	7.47		235.4	2.302
26.6	199.1		96.8	30.79		167	7.224		237.2	2.241
28.4	178.5		98.6	29.54		168.8	6.998		239	2.182
30.2	169.5		100.4	28.36		170.6	6.761		240.8	2.124
32	161		102.2	27.23		172.4	6.542		242.6	2.069
33.8	153		104	26.15		174.2	6.331		244.4	2.015
35.6	145.4		105.8	25.11		176	6.129		246.2	1.963
37.4	138.3		107.6	24.13		177.8	5.933		248	1.912
39.2	131.5		109.4	23.19		179.6	5.746		249.8	1.863
41	125.1		111.2	22.29		181.4	5.565		251.6	1.816
42.8	119.1		113	21.43		183.2	5.39		253.4	1.77
44.6	113.4		114.8	20.6		185	5.222		255.2	1.725
46.4	108		116.6	19.81		186.8	5.06		257	1.682
48.2	102.8		118.4	19.06		188.6	4.904		258.8	1.64

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